Investor Protection and Financial Markets Development in Transition Economies. An Empirical Analysis.

Contents

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Chapter 1

Introduction

The relevance of law in promoting appropriate and effective mechanisms of corporate governance has long been debated in literature. Legal scholars, as Easterbrook and Fischel (1991), suggested that legal rules are not of primary importance in influencing the dynamics of the corporate governance. In particular, they argued that firms can opt out of these rules in their corporate charters using non - standard contracts in the transaction with outsider investors.

However, in recent years, economists have highlighted the positive role that law, and its enforcement, play in encouraging effective mechanisms of corporate governance and the development of financial markets.

In a pioneristic work La Porta et al. (1997) show that legal rules protecting creditor and shareholder rights, as well as their enforcement, are an important determinant of the development of stock and credit markets. These results are also confirmed by Klapper and Love (2004), La Porta et al. (2006), and Pistor et al. (2000) with a specific regard to transition economies.

La Porta et al. (2000) argued that outsider investors financing firm face the risk to be expropriated from managers and controlling shareholders. In particular, lower is the cost of the expropriation technology, higher is the risk for outsider investors to be expropriated. Therefore, if the firm has not a strong reputation, rational investors will be less willing to finance it; this will increase the cost of external finance. In the vein of La Porta et al. (2000) the legal protection of

creditor and shareholder rights can reduce the risk of expropriation by reducing the efficiency of the expropriation technology. In fact, when the legal protection of investors increases, insiders have to operate with more complicated and expensive strategies in order to steal profits. The reduction in the private net benefits of expropriation caused by the increasing of the costs of the expropriation activity, reduces the risk for outsiders to be robbed. Therefore, lower is the probability to be expropriated by the insiders, higher is the willing of investors to finance firm. This improves the condition at which firms raise external finance and consequently encourages the development of the financial markets.

In this work we examine the relationship between legal protection of outsider investors and financial markets development iin transition economies. As starting point we assume the work of Pistor et al. (2000). In particular, we extend it taking into account years until 2004 (Pistor et al. (2000) consider just 1998) and including in our regressions further controls from the ones they have considered.

The motivations for this exercise are the following. First of all, in the earlier 1990s transition economies experienced dramatic political, social and economic changes, which have made these countries a natural experiment to study the relationships between corporate governance and financial markets development.

In particular, during the socialist regime firms did not have to worry about raising external finance because financial resources were provided under the central plan. Once the central planning was abolished, firms face the problem of substituting government finance with new sources of external finance. This question has a key role in the reform plan of corporate governance and in the restructuring program of many countries; improving the protection of creditor and shareholder rights, in fact, could encourage the supply of both domestic and foreign investors. Consequently, conditions at which firms raise external finance could improve, promoting through this channel the development of the financial system.

The necessity of substituting government finance and, in general, the shift to a market economy leads transition economies to deal with new problems never faced before. For example, the im-

plementation of bodies supervising stock and credit markets, as well as appropriate and modern mechanisms of corporate governance. These changes were usually experienced with the aim to rapidly conform to the western standars. The results of this process was often the mere transfer of western commercial law to transition economies not taking into account the specific characteristics of these countries. Many transition economies are still characterized by a significant state intervention in the corporate decision - making process as well as by a low dispersion of the corporate ownership in many sectors. The state, in fact, retains control over many firms through the mechanism of the golden shares which is granted in exchange of subsidies, tax arrears, and subsidies. In addition, many companies are characterized by an high concentration of the equity ownership in the hands of a limited number of insiders. This is essentially the result of the mass privatization programs which took place in the earlier years of transition with the aim to rapidly privatize state - owned assets. These methods of privatization were usually designed and implemented by the managers in office who had accumulated implicit rights of control due to the weak state monitoring under the regime. The effect of such a situation was essentially that privatization programs led to the explicit recognition of this power of control through the allocation of the corporate shares in the hands of these managers. These events discouraged the birth of a wide category of outsider investors and also dissuaded domestic and foreign investors from providing sources to firms. Therefore, studying the link between law and financial markets development has also the aim to test how the rules, transition economies have adopted from the western, perform in a different environment.

Even if more than ten years of transition have been elapsed, transition economies still show underdeveloped stock and credit markets, especially from an international perspective. Extending the work of Pistor et al. (2000) is important in order to identify the key factors which could encourage the development of financial markets. The main result of Pistor et al. (2000) is that for transition economies the most relevant determinant of financial markets development is the quality of the enforcement of the legal rules protecting outsider investors. The quality of the law enforcement, as measured by the *rule of law*, has a more important role than the law on

the book in promoting the growth of the financial system. Our findings essentially confirm the result of Pistor et al. (2000) but a word of caution is due. In fact, we also highlight that the *rule of law* matters more than the law on the book in promoting financial markets development in transition economies. However we find that the role of the *rule of law,* in promoting financial markets development, is not relevant as it seems in Pistor et al. (2000). Specifically, when we control for the level of the *GDP per capita*, we find that the impact of the *rule of law* is overstimated in explaining the development of the financial system, in Pistor et al. (2000).

The present work is structured as follows. Chapter 2 presents a survey of the literature related to the key issues of corporate governance and corporate finance. In particular, we assume as starting point the problem of the separation of ownership and control (Berle and Means (1932)) in order to analyse the divegence of interests between managers and shareholder. The existence of a divergence in the objectives of managers and shareholders is, in fact, the first determinant of the problem of the expropriation. Subsequently, we extend this analysis taking into account further categories of stakeholders. Specifically, we first define two categories of shareholders: controlling shareholders and minority shareholders. Secondly, we include the role of the creditors of the firm. Assuming that controlling shareholders and managers persecute the same objectives, we examine the problem of the expropriation with regard, respectively, to creditors and minority shareholders. After that we analyse the problem of the expropriation in terms of agency relationship, in the light of the model of Jensen and Meckling (1976).
In addition, we discuss the main contributions of the literature concerning the legal approach to corporate governance and corporate finance (La Porta et al. (1997) and (1998), Beck et al. (2000), Pistor et al. (2000)). We also discuss the opposite point of view of the law and economics literature with regard to the regulations of financial markets.
Finally, we analyse highliting the relevance of the link between law and financial markets, in the light of the recent finding on economic growth and finance (King and Levine (1993), Beck et al. (2000)).

In chapter 3 we present a descriptive analysis about the main patterns of financial markets

development in transition economies. In particular, in section 3.1 and 3.2 we provide, respectively, statistics and charters with regard to the main variables describing the development of the stock and credit markets.

In chapter 4 we investigate the relation between legal rules, both law on the book and its enforcement, and financial markets development in transition economies. Specifically, section 4.1 summarizes the pioneristic results of La Porta et al. (1997) and (1998). These findings will be the reference in the representation and interpretation of our analysis. Section 4.2 illustrates our empirical analysis concerning the effects of the legal protection of outsider investors on financial markets development.

Chapter 5 contains some concluding remarks.

Chapter 2

A survey of literature

The problem of the separation of ownership and control

Many firms operating in the financial markets are characterized by the presence of the well - known phenomenon of separation of ownership and control as highlighted by Berle and Means (1932). These authors coined the expression ”separation of ownership and control” observing, in 1920s, the changing in the ownership structure of many corporations operating in the United States. These structures switched from the traditional arrangement of owners managing their own company, to one in which shareholders had become so numerous and dispersed that they were no longer willing (or able) to manage the corporation they owned. The dispersion of the ownership and the increasing number of shareholders made more difficult for the latter ones managing the company, consequently determining the shifting of the control from owners to managers.

In the view of Berle and Means (1932), the central problem that such a situation places, is that owning the control of the firm, managers are more able to engage in behaviors that not always maximize the utility of the shareholders. Specifically, taking advantage of their power of control, they would persecute different objectives from the ones that maximize the utility of the owners. The objectives maximizing managers' utility, in disadvantage of shareholders' utility, are characterized by economic and/or not economic returns like the increase in their

salary as well as more prestigious assignments and larger offices.

In the light of the contribution of Berle and Means (1932), clearly emerge that the standard model related to the separation of ownership and control is characterized by a possible opposition between the objectives of managers and owners of the corporation.

However, looking at the modern features of most companies, we can extend the issue of the separation of ownership and control and make it more articulated. First, by a better definition of the figure of the shareholders, taking into account the role of minority shareholders; second, including the role of the creditors of the firm.

The stockholders of the company could be divided into two different categories: the controlling shareholders (also called blockholders) and the minority shareholders. The controlling shareholders own the largest share of the equity which allows them to exercise many different control rights on the firm' s management and to define the most important guidelines of the company s action. Minority shareholders, indeed, hold the residual and dispersed percentage of the equity which does not allow them to exercise a strong influence on the company s decision - making process.

Creditors are characterized by financing the firm through a different channel from the equity identified by the debt. We can distinguish two different type of debt used by companies. Loans provided by banks and other financial institutions, and bonds issued by the company and subscribed by the the bondholders.

In this extended and more articulated framework, managers still carry out their usual functions and we refer to them, as well to the controlling shareholders, as the insider parties of the firms. Differently, we refer to the minority shareholders and creditors as the outsider parties of the firms.

Focusing on the relationships between insiders and outsiders, we can observe more complex dynamics than the ones described in the traditional model related to the separation of ownership and control.

Firstly, we have to take into account that in this new framework the conflictual relationship

between managers and owners expresses itself in a different way from the conventional one. It involves, in fact, just the minority shareholders and not the whole owners' category as described in Berle and Means (1932).
Secondly, it has to be taken into account the opposition between the interests of the insider parties of the firm and the interests of the creditors.

Another characteristic concerning this specific framework is that the roles of managers and controlling shareholders are not in contrast because we assume that they are perfectly overlapping. By holding the biggest fraction of the equity and controlling therefore the most important decisions of the company, blockholders ensure themselves that the persons they appoint as managers will persecute their same interests and goals. In the extreme hypothesis, managers and controlling shareholders could be also the same persons. For these reasons we refer to them, henceforth, with the expressions *managers - controlling shareholders* or *managers - blockholders*.

Summarizing, we observe possible divergent interests between the insider and the outsider parties of the firm. Specifically, on one side, there is the conflict between the interests of minority shareholders and *managers - controlling shareholders*; on the other side between the interests of *managers - controlling shareholders* and creditors of the firm.

The agency relationship between insiders and outsiders

Looking at these conflictual relationships is important to note that they also configure agency relationships which follow all the dynamics discussed by Jensen and Meckling (1976)[1].
In our framework, the traditional problem affecting the agency relationship presents the following characterization: outsiders have to establish adequate incentives in order to limit the not

[1]"An *agency relationship* is a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some services on their behalf which involves delegating some decisions making authority to the agent. If both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal." Jensen and Meckling (1976). In the framework we consider the principal and the agent are defined as follows. The principle is alternatively identified in the minority shareholders and in the creditors of the firm; the agent in the *managers - controlling shareholders* of the company.

appropriate use of the company' s resources by the insiders. If insider actors of the company are utility maximizers, such as minority shareholders and creditors, we can expected they use the resources of the firm not always to satisfy the same interests of the outsider investors. Once again, the goals of the insiders can consist not only in pecuniary returns but also in non pecuniary returns as the respect and the admiration of the others members of the company, the certainty of their employment, a larger office or staff etc.

In the opinion of Jensen and Meckling (1976) the conflict between minority shareholders and *managers - blockholders* concerns, in particular, the non - pecuniary returns. This because insiders bear only a fraction of the costs of any non - pecuniary benefits they take out in maximizing their own utility. As Jensen and Meckling (1976) suggested, "if the manager [*managers - controlling shareholders*] owns only 95 percent of the stock, he [they] will expend resources to the point where the marginal utility derived from a dollar s expenditure of the firm s resources on such items equals the marginal utility of an additional 95 cents in general purchasing power (i.e., his [their] share of the wealth reduction) and not one dollar."

The outsider shareholders can limit, but probably not eliminate, such a phenomenon undertaking some different and costly activities. In particular, costs originated by these activities are the well - known agency costs as defined by Jensen and Meckling (1976). First of all, minority shareholders can restrict the discretion in insiders' actions by monitoring their behavior. The monitoring activities involves not only the observation of insiders' actions but also others measures as imposing budget restrictions, defining compensation policy etc.

In addition, minority shareholders can also pay the insiders in order to ensure they will not take the decisions that maximize only their own utility. Or, alternatively, they can pay managers and controlling shareholders to ensure that the outsider stockholders will be compensate in the hypothesis insiders take decisions that satisfy only their interests. These two activities determine two different types of costs, respectively called *monitoring* and *bonding* expenditures[2].

However, even if the outsider shareholders try to limit the divergence of interests through the

[2] Jensen and Meckling (1976).

activities described before, it can happen that insiders still want to reach their goals. In this case, outsider shareholders bear an additional agency cost called *residual loss*, where for residual loss we mean the dollar equivalent to the reduction in welfare experienced by the principal as a result of the divergence existing between his interest and the interest of the agent.

Given such a situation, the minority shareholders will pay a price, for the shares issued by the company, that reflect these costs and which is lower than the price that would be paid if they did not sustain these costs. Consequently the amount of financial resources that company can raise will be lower, all things being equal, than the amount it could get in the case minority shareholders have not to control insiders' actions.

The agency relationship between the insider parties of the corporation and its creditors is mainly focused on the risk related to the firm' s investment projects that *managers - blockholders* want to realize using the funding of creditors.

Following Jensen and Meckling (1976), if the company' s creditors are bondholders, we have to assume the two following hypotheses before describing the results of the divergence of interests on bondholders' choices. First, *managers - controlling shareholders* can choose between two different investments each one characterized by a different level of risk. One is an high variance investment project: if successful, it promises high returns but it has a low probability of success. The other one is a low variance investment project: if successfull, it is characterized by a lower pay - off but it has an higher probability of success. The second hypothesis we have to consider is that *managers - blockholders* have the opportunity to first issue debt, then to decide which of the two investments take.

Given such a situation, we observe that insiders have always the incentive to cheat bondholders. *Managers - controlling shareholders* will promise to bondholders they will undertake the low variance project but after bonds are issued and funds are raised, they will take the high variance investment.

The reason of such a decision is that by promising to take the low variance project, selling bonds and then taking the high variance project, insiders can transfer wealth from the naive

bondholders to themselves as equity holder. In case of success of the high variance investment, insiders will have a bigger fraction of returns compared to the ones of the low variance project. Bondholders will be refund, as usual, of the nominal value of the bonds they purchased and of the interests company promised them. In case of failure of the high variance investment, managers and controlling shareholders will obtain a lower or a null return but they will bear no costs. Bondholders, indeed, will sustain the most part of the costs of the failure. They will not receive the promised interests on bonds and they will lose the money they provided to the firm buying bonds. In other words, insiders cheating bondholders and taking the high variance investment, transfer the risk of the investment' s failure from them to the bondholders.

The latter ones, obviously, cannot prevent that insiders will take the more risky investment but they can perceive that. Therefore, bondholders will pay a price for the bonds issued by the company, lower than the one they would paid in the case they trust the managers' promise to take the low variance investment[3].

As minority shareholders, bondholders can limit the insiders' actions due to the existence of

[3]"Assume we have a manager - owned firm with no debt outstanding in a world in which there are no taxes. The firm has the opportunity to take one of two mutually exclusive equal cost investment opportunities, each of which yields a random pay - off, X_j, T periods in the future (j=1,2). Production and monitoring activities take place continuously between time 0 and time T, and markets in which the claims on the firm can be traded are open continuously over this period. After time T the firm has no productive activities so the pay - off X_j includes the distribution of all remaining assets.The distributions differ only by their variances with $\sigma_1 < \sigma_2$. Let X^* be the amount of the fixed claim in the form of a non-coupon bearing bond sold to the bondholders such that the total pay - off to them R_j (j=1,2, denotes the distribution the manager chooses), is:

$$R_j = X^* \tag{2.1}$$

if $X_j \leq X^*$ and

$$R_j = X_j \tag{2.2}$$

if $X_j \geq X^*$

Let B_1 be the current market value of bondholder claims if investment 1 is taken, and let B_1 be the current market value of bondholders claims if investment 2 is taken. Since in this example the total value of the firm, V, is independent of the investment choice and also of the financing decision we can use the Black-Scholes (1973) option pricing model to determine the values of the debt, B_j and equity, S_j , under each of the choices. Black-Scholes derive the solution for the value of a European call option (one which can be exercised only at the maturity date) and argue that the resulting option pricing equation can be used to determine the value of the equity claim on a leveraged firm. That is the stockholders in such a firm can be viewed as holding a European call option on the total value of the firm with exercise price equal to X^* (the face value of the debt), exercisable at the maturity date of the debt issue. More simply, the stockholders have the right to buy the firm back from the bondholders for a price of X^* at time T. Merton (1973, 1974) shows that as the variance of the outcome distribution rises the value of the stock (i.e., call option) rises, and since our two distributions differ only in their variances, $\sigma_1 < \sigma_2$,the equity

a divergence of interests. All the activities carried out by the bondholders in order to control the behavior of managers and blockholders are costly. Also in this case we have three different kind of agency costs: the *monitoring costs*, the *bonding costs* and the *bankruptcy* and *reorganization costs*.

The *monitoring costs* in the case of the bondholders, however concern different aspects. Bondholders can monitory the behavior of managers and controlling shareholders by the inclusion of different clauses in the contract related to the buying and selling of bonds. These provisions can be related to dividends, future debt issues, maintenance of working capital etc. The *monitoring costs* are associated, in the specific, to the settlement and to the enforcing of these clauses. To be really protected, bondholders should specify, in details, all these provisions and consequently they should also pay a lot of attention to ensure clauses will be enforced. But being the firm' s activity a continuing decision - making process, it will be almost impossible to completely specify such conditions and in any case it will be complicated and wasteful for bondholders do that.

In the relationship between bondholders and insiders, the *bonding costs* acquit the same function we noted before in the case of minority shareholders. However they obviously concern different aspects. For example we can find that "the bondholders would find worthwhile to produce detailed financial statements such as those contained in the usual published accounting reports as a means of monitoring the managers. If the managers themselves can produce such

value S_1 is less than S_2. This implies $B_1 > B_2$, since

$$B_1 = V - S_1 \tag{2.3}$$

and

$$B_2 = V - S_2 \tag{2.4}$$

Now if the owner - manager could sell bonds with face value X^* under the conditions that the potential bondholders believed this to be a claim on distribution 1, he would receive a price of B_1. After selling the bonds, his equity interest in distribution 1 would have value S_1. But we know S_2. is greater than S_1 and thus the manager can make himself better off by changing the investment to take the higher variance distribution 2, thereby redistributing wealth from the bondholders to himself. All this assumes of course that the bondholders could not prevent him from changing the investment program. If the bondholders cannot do so, and if they perceive that the manager has the opportunity to take distribution 2 they will pay the manager only B_2 for the claim X^*, realizing that his maximizing behavior will lead him to choose distribution 2." Jensen and Meckling (1976).

information at lower costs than they (perhaps because they are already collecting much of the data they desire for their own internal decision - making purposes), it would pay them to agree in advance to incur the cost of providing such reports and to have their accuracy testified to by an independent outside auditor"[4].

The third sort of agency costs that bondholders have to bear are the *bankruptcy* and *reorganization costs*. These costs are related to the problem of the definition of the priority of the claims of the different stakeholders on the firm' s assets. The bankruptcy process, in fact, involves an adjudication process which itself wore out a fraction of the residual value of the assets of the firm. Therefore, the costs of bankruptcy will be of concern to potential buyers of fixed claims in the firm since their existence will reduce the pay - off to them in the event of bankruptcy.

Once again all these costs will be taken into account by the bondholders during the negotiation with the company, for example by asking an higher interest rate on bonds. As we observed before, in fact, the price that bondholders decide to pay for bonds depends not by these costs but by the risk of the investment project *managers - controlling shareholders* want to take.

Until now we talk about creditors as bondholders. However, as discussed above, the figure of the creditors involves also the role of other figures as banks and other financial institutions which provide loans to the company. In this case, the agency problem concerns the same aspects observed in the case of bondholders. However, it will produce its effects on the interest rate that firm has to pay on the credit provided by banks and other similar institutions. In particular, higher the risk of the investment and the agency costs, higher is the interest rate they ask to the firm.

Therefore, the relationship between insiders and creditors influences, as well as the relationship concerning insiders and minority shareholders, the capability of the firm to get necessary funds to finance its investments. In particular the existence of a divergence of interest between these parties, makes more costly the sources of external finance. This consequently reduces the opportunities for firms to raise funds from outsider investors.

[4] Jensen and Meckling (1976).

The analysis in term of agency relationships of the existing dynamics between outsider and insider actors of the firms, allows us to do an important consideration. The adverse selection and moral hazard problems, emerging from the divergence of interests existing between insiders and outsiders, influence the decisions, of minority shareholders and creditors, concerning the funding of the firm. In particular higher the costs and the risks outsiders face financing the firm, lower is their willingness to provide resources to the company and especially higher is the cost at which they do that. More costly is getting money from outsider investors and more difficult for firms is raising external finance consequently discouraging the development of the financial markets: both stock and credit markets.

The legal approach to corporate finance

The recent literature on corporate governance and corporate finance anlyses the effects on the development of financial system of the conflicts between the insider and outsider parties ofn the firms.

This literature starts with the work of La Porta et al. (1997) and highlights the importance of an alternative mechanism to the private negotiation, in order to limit the negative effects of the divergence of interests, between insiders and outsiders, on the capability of the firms to get funds. As observed before, the attempts of outsider investors to limit the phenomenona of moral hazard and adverse selection, lead to additional costs (*monitoring* and *bonding expenditure*, *residual loss* and *bankruptcy costs*) which influence the terms at which they provide resources to firms and consequently the possibility for companies to raise external finance.

The alternative mechanism to the private negotiation, suggested by this literature, is the protection of outsider investors through the legal system, meaning both laws and their enforcement. In this view, the recognition of outsider investors' rights can act, through a specific channel, on the existing divergence of objectives between insiders and outsiders. The legal protection of minority shareholders and creditors, in fact, can make the expropriation technology used by the insiders, in the achievement of their interests, less efficient and consequently, by this way,

increasing the possibilities for firms to raise external finance.

With the expression *expropriation technology*, scholars refer to the technology through which insiders carry on the expropriation activity involving all the insiders' actions aimed to the achievement of their personal interests to the disadvantage of outsider investors.
In the framework usually designed by this literature, the goals that insider parties of the company want to reach have usually stronger pecuniary characters than the ones described in the model of Jensen and Meckling. Looking at the real functioning of the financial markets, insiders want to arrive to objectives which imply, in most part, pecuniary returns rather than non - pecuniary ones. And this concerns also the relationship with the minority shareholders, differently from that suggested by Jensen and Meckling (1976).
Papers dealing with the legal approach to corporate governance and corporate finance, define the phenomenon of expropriation in different way, mainly referable to activities which lead to economic returns. The expropriation, in fact, can take various form: it can switch from simply stealing profits to the appointment of unqualified family members in managerial positions. In other instances insiders can sell the assets, the output or the stocks of the firm they control to another company they own at a price below the market value. Alternatively the expropriation can assume the form of the overpaying of the executives or the form of the insider trading and self dealing phenomenons.

Therefore the attribution of different rights to the outsider investors could make the technology of expropriation more costly for insiders. The rights that law can attribute to outsider investors are different. For example, for minority shareholders, could be the right to participate in shareholders' meeting or the appointment of the members on the board of directors, as well as to receive dividends on pre - defined terms. In the case of creditors, and precisely senior secured creditors[5], the rights that law can protect concern, for example, measures that enable

[5] A secured creditor is a creditor which has the benefit of a security interest over some or all of the assets of the debtor. A security interest is a property interest created by agreement or by operation of law over assets to secure the performance of an obligation (usually but not always the payment of a debt) which gives the beneficiary of the security interest certain preferential rights in relation to the assets. The rights vary according to the type of security interest, but in most cases (and in most countries) the main rights and purpose of the security interest is to allow the

them to repossess collateral or to protect their seniority. In the hypothesis of junior unsecured creditors[6], law has, instead, the objective to preserve the firm in case of an its financial - economic crisis as long as possible. By this way, law wants to allow creditors to get some money back if the firm turns profit.

The rules protecting minority shareholders and creditors can come from different sources as stock exchange regulations and accounting standards. As well as company, competition, and bankruptcy laws. Or, in other instances, from takeover and security laws.

A more detailed investigation of the rights that legal system can attribute to the outsider investors and the specific effects they produce on the financial markets' development will be discuss in Chapter 4. In the following, we continue our analysis describing the mechanism through which such rights can hind insiders in persecuting their personal goals and, by this way, promote the expansion of the financial markets.

Rules, law enforcement and expropriation technology

With no investor protections *managers - blockholders* can act in their own interests in a perfect efficient way. Therefore if the firm does not have a very strong reputation, no rational investor would finance such a company. When the legal investor protection increases, insiders have to operate with more complicated and expensive strategies to steal profits such as the foundation of a wide of companies in to channel the proceeds of their unfair activities. Therefore higher is the protection that law accords to outsider investors more costly became the expropriation technology and narrower is the set of opportunities available to the insiders in order

holder to seize, and usually sell, the property to discharge the debt that the security interest secures. In the event of the bankruptcy of the debtor, the secured creditor can enforce their security against the assets of the debtor, and avoid the competing for a distribution on liquidation with the unsecured creditors.
Senior creditors are characterized by owning senior credits. Senior credits are the ones that in case of bankruptcy must be repaid before subordinated credits are repaid. Subordinated credits are characterized by ranking below all the others loans or securities with regard to claims on assets or earnings. Also known as "junior security" or "subordinated loan", subordinate credits would not get paid out until after the senior's ones were paid in full.

[6] An unsecured creditor is a creditor which is not a preferential creditor and which does not have the benefit of any security interests over the assets of the debtor.In the event of the bankruptcy of the debtor, the unsecured creditors usually have an equal treatment in the distribution out of the assets of the insolvent company on a liquidation in accordance with the size of their debt after the secured creditors have been enforced their security and the preferential creditors have exhausted their claims.

to efficiently expropriate creditors and minority shareholders. The reduction in the private net benefits of control, determined by the increasing of the costs of the expropriation activity, consequently reduce the risks for outsiders to be expropriate. Lower is the probability to be robbed by the insiders and better are the terms at which outsider investors provide financial resources to the firms. Consequently higher are the opportunities for companies to raise external finance promoting in this way the growth of financial markets.

However many authors, such as La Porta et al. (1998) and La Porta et al. (2000), emphasize not only the role of the law on the book but also its enforcement as instrument through which encouraging the financial markets development. The enforcement of the legal provisions can come from different channels as courts and/or different supervisor bodies such as securities commissions or central banks. Specifically, the mechanism of enforcement can work in addition to the law on the book as well in its substitution where a given country is characterized by a weak legal protection on the book of outsider investors. The enforcement of the legal rules protecting outsider investors' claims is important in order to ensure them that law on the book really acquit to the aim it is settle for. Through the mechanisms of enforcement, the legal system reduces the incentives for insiders to cheat outsider investors in addition to the effects produced on the expropriation technology by the law on the book. The enforcement' s mechanisms, as well the law on the book, narrow the incentives of the insiders in swindling outsiders by influencing the efficiency of the the expropriation technology. As the legal rules, the enforcement' s means produce their effects on the efficiency of the expropriation technology ex - ante, during the decision - making process of the insiders. In fact, deciding if take or not an action in order to expropriate outsiders, *managers - controlling shareholders* have to take into account the existence of a sanction related to the commitment of such an action.

Therefore, for the recent literature on corporate governance, law on the book and mechanisms of enforcement could be the main way through which promote the access of firms to external finance consequently increasing the financial markets development. The relying on the legal system reduces the agency costs borne by the outsider investors in order to limit the abuses

insiders could commit. Consequently, the reduction of the agency costs improve the terms at which outsiders are willing to provide their funds, producing positive effects on the raising of external finance by the companies and on the development of the financial system.

The literature concerning the legal approach to corporate governance and corporate finance is characterized by investigating the dynamics discussed before mainly through empirical analysis rather than theoretical models.

The main contributions concerning the legal approach to corporate governance

The first paper related to this argument is due to La Porta et al. (1997). As suggested by La Porta et al. (1996)[7] countries having different legal origins[8] show differences in the extension of the legal protection of outsider investors. Specifically countries belonging to some legal families are characterized by a stronger protection of outsider investors than the ones belonging to other legal families.

Given these results, La Porta et al. (1997) studied its influence on the development of the stock and credit market of those countries. The result of the investigation is that countries with an higher protection and a better enforcement of outsider investors' rights also have more developed financial markets. In particular these countries show an higher value of the ratio *external market capitalization to GNP*[9], of the *number of domestic listed firms per million peopl*e and of

[7]La Porta, R., Lopez de Silanes, F., Shleifer, A., Vishny, R., 1996. Law and Finance, NBER Working paper 5661. After that this work was published in 1998. See LLSV (1998).

[8]They divided the 49 countries they were studying in two group: civil law countries and common law countries. The criteria of the classification is the mechanism through which, in these countries, law concerning investor protection is settle. By codes in the civil law countries and by judges' sentences in the common law countries. They also classified the civil law countries in three further categories related to the commercial codes that historically have influenced their legal system in the protection of investors. Therefore they also distinguished: French civil law countries (influenced by the French Commercial Code written under Napoleon in 1807), German civil law countries(influenced by the German Commercial Code of the 1897 written after the Bismarck unification of Germany) and Scandinavian civil law countries. For the last group, LLSV use a classification in negative. The Scandinavian civil law countries involve the Nordic countries which have laws "similar to each other but distinct from the others". For this reason they keep the Nordic countries in a different family from the others.

[9]With the variable external market capitalization authors refer specifically to the stock market capitalization held by minority shareholders. It is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non - financial, privately owned domestic firms in a given country. A firm is considered privately owned if the state is not a known shareholder in it. La Porta et al. (1997).

the *number of initial public offerings of equity per million people* as well as an higher ratio *debt to GNP*[10].

Many different authors as Beck et al. (2003) and Klapper and Love (2004) find a confirm of this evidence. In addition, Klapper and Love (2004) show that companies operating in countries characterized by an higher quality of the legal protection of outsider investors, adopt on average, better mechanisms of corporate governance. These firms also show higher measures of their ROA[11] and of their Tobin' s q[12]. In particular Klapper and Love (2004) suggest that the relationship between the quality of the companies' models of corporate governance and the quality of the legal protection of outsider investors is not an accidental relationship. They argue that firms operating in an environment characterized by a weak legal protection of investors' rights could improve, autonomously, the mechanisms of corporate governance they use. However, such a solution is costly for firms. First because of the costs due to the implementation of those measures in order to compensate the ones missing in the legal order of their country. Second because of the costs related to the enforcement mechanisms due to the difficulty coming up in the understatement and in the application of such non - standard measures.

The results reached by La Porta et al. (1997) concern a sample of countries which not involves the economies in transition[13]. For these countries, the first comprehensive analysis on the link between the outsider investors' protection and financial markets development has been conducted by Pistor (2000) and by Pistor et al. (2000). The latter paper does not confirm the results of La Porta et al. (1997). Specifically, Pistor et al. (2000) show that there is not a positive and statistical significant relationship between legal investors' protection and some different

[10]The variable debt concern the sum of bank debt of the private sector and outstanding non financial bonds. See La Porta et al. (1997).

[11]ROA stand for return on assets. It is computed as the ratio net income/total assets and tell how many dollars of earning derive from each dollar of invested assets.

[12]Tobin' s q ratio is calculated as the market value of a company divided by the replacement value of the firm's assets. It compares the value of a company given by financial markets with the value of a company's assets. For example, a low value of the ratio Q (between 0 and 1) means that the cost to replace a firm' assets is greater than the value of its stock. This implies that the stock is undervalued. Conversely, a high value of the ratio (greater than 1) implies that a firm' s stock is more expensive than the replacement cost of its assets, which implies that the stock is overvalued.

[13]We define a transition economy as an economy which is changing from a planned economy to a free market.

measures of financial markets development as the *stock market capitalization to GDP* and the *private credit to GDP*[14]. For transition economies, in fact, law on the book protecting outsider investors, does not matter for the development of both stock and credit market. Differently from La Porta et al. (1997), Pistor et al. (2000) find that the quality of the institution, measured by the rule of law, is the main determinant of the financial markets development in transition economies.

The traditional approach of the law and economics literature

As often underlined in the present work, the literature concerning the legal approach to corporate governance and corporate finance, focus on the role of the legal system in facilitating the relationships between insiders and outsiders parties of the companies and by this way promoting the development of financial markets. The legal approach to corporate finance is in contrast, however, with the traditional point of view of the law and economics, mainly due to Coase (1960), which considers the private negotiation of the agents the main mechanism on which the functioning of the markets has to based on. In this vein, financial markets do not need any additional regulation in order to facilitating the relationships between insiders and outsider investors and avoiding, by this way, the phenomenon of the expropriation. The private negotiation is the only necessary instrument through which the efficient functioning of financial markets is ensured. Firms that lack to provide informations about the characteristics of their investment projects (in particular on its risk) or about the authentic attributes of the shares and bonds issued, will be penalized. Perceiving that *managers - blockholders* controlling firm lack to disclose all the sensitive informations[15], outsider investors will assume the worst and consequently they will modify, penalizing the firm, their investments' decisions. In particular shareholders and bondholders will offer for the stocks and bonds issued by the firm a lower price than the one would be paid in case of complete disclosure by the company. Similarly, banks and bondholders will

[14]The variables stock market capitalization and private credit as the same meaning of the variable external market capitalization and debt explained for La Porta et al. (1997). See footnote 9 and 10.

[15]Sensitive informations are informations that might result in loss of an advantage or level of security if disclosed.

ask an higher interest rate as cost of the money they provide to firms. Therefore, in the view of the traditional law and economics literature, companies, knowing they will be penalized by the market in case of non complete disclosure, will have incentives to provide all the sensitive informations. The incentives come from the costs firms will bear because of the changing in outsider investors' decisions. These costs are identified in the reduction of the net funds' collect due to the increasing of the interest rate and to the reduction of shares and bonds price. For the usual approach of law and economics, the private negotiation always leads to an efficient resources' allocation between the market's agents. So no additional legal rules are needed in order to ensure the functioning of the financial markets.

Others authors as Easterbrook and Fischel (1991) suggest that legal rules are not of primary importance for the dynamics of financial markets because firms can opt out of these rules in their corporate charters using non - standard contracts in the transactions with outsider investors. This approach, differently from the previous one, does not consider the private negotiation as a substitutive instrument to the legal rules in order to ensure the well functioning of the market. In fact, they simply note that even if a legal system occurs, firms can always have to do nothing with it, being able to adopt different solutions in the transactions with outsider investors from the ones contemplated by the laws.

However, La Porta et al. (2006) suggest that additional financial markets' regulations and systems of enforcement are necessary in order to ensure outsider investors against the risk of expropriation. They argue that reputational mechanisms, such as the one concerning the penalization of firms by the market, are not sufficient to induce issuer to disclose the omitted informations because the pay off, from cheating outsiders, still remain too high compare with the costs associated with the penalization. In addition, general provisions of contract and tort law are insufficient to keep insiders to expropriate outsider investors because, once again, the pay - off deriving from the expropriation is still to high for *managers - blockholders*. On the other side, eventual contract and private tort litigation are too expensive and unpredictable for outsider investors to work as efficient and effective remedial measures. La Porta et al. (2006)

also add that, looking at the real functioning of the financial markets, even if firms lack to disclose all the necessary informations, outsiders investors not always assume the worst buying bonds and shares issued by the companies. In addition they argue that the private negotiation in itself can not resolve another important problem of the actual arrangement of financial markets. They refer at the liability of the distributor[16] in its relationship with outsider investors. Namely, what are its affirmative informative obligations to investors.

As regards to the possibilities of firms to adopt alternative contractual mechanisms from the standard ones treated by the law, as suggested by Easterbrook and Fischel (1991), La Porta et al. (1997) argued that such a solution could be costly for firms. First of all, outsider investors could not trust the non - standard rules and consequently they could not accept them. Second, judges could have difficulty in the interpretation and in the enforcement of the non - standard contracts as Klapper and Love (2004) observed in the hypothesis of companies operating in countries characterized by a weak legal protection of outsiders' rights.

Financial markets development and economic growth

Moreover, if we consider the links between financial systems and economic growth, as discussed by many scholars in the latest years, we can further understand why such an emphasis on the issue of the legal investors' protection. In particular, it is possible to link the legal protection of outsider investors not only to financial markets development but also to economic growth.

The modern literature on the links between financial systems and economic growth started with King and Levine (1993). They show how countries with more developed financial markets, in initial periods, have higher rates of economic growth in subsequent years. In particular, Beck et al. (2000) suggest that there are three channels through which the financial system can con-

[16]The distributor is the name given to institutions that sell or distribute mutual funds to investors for fund management companies without direct relation to the fund itself. Distributor receives a portion of the trailer fees associated with mutual fund sales for acquiring new business. More precisely, a mutual fund is a pool of funds collected from many investors for the purpose of investing in securities such as stocks, bonds, money market securities and similar assets.

tribute to economic growth. The first involves the enhancement of savings. Secondly, savings can be channeled into real investments promoting physical capital accumulation. Through the supply of capital, outsider investors can control investment decisions of the firms ensuring that capital flows to productive uses. In this way they consequently improve the efficiency of the allocation of the resources, which is the third step through which the financial system can promote economic growth.

Therefore, if economies with more developed financial markets show higher growtwh rates and countries with better legal protection of outsiders' rights have more developed financial systems we can state an important thing. Through the development of the financial markets, the legal protection of outsider investors promote the economic growth of a given country. In this way we can refer to the legal system, both law on the book and its enforcement, as a determinant of the process of economic development.

In the light of the observations we made, it is possible to understand the importance of the issue of the legal protection of minority shareholders and creditors of the firm. This aspect assumes a particular significance for transition economies.

These countries, in fact, being characterized by a specific historical, political and economical pattern, are a special and natural experiment in order to test the main results of the literature illustrated in this chapter.

Chapter 3

Patterns of development

Even though more than ten years of transition have been elapsed, many authors, as Slavova (1999) and Claessens et al. (2000), observe that in transition economies financial markets are still underdeveloped.

A report of the World Bank edited in 2002, concerning the evolution of the transition process, highlights the underdevelopment of both stock and credit markets. In addition, it shows that different there exist two groups of countries. The first group is represented by countries belonging to Central - Eastern Europe and South - Eastern Europe (CEE/SEE). The second group is composed by countries belonging to the Commonwealth of Indipendent States (CIS). In particular the report shows that the CIS countries usually lag behind for all the relevant proxies of financial development, differently from the CEE/SEE countries which usually show good performances. These results are confirmed by the descriptive analysis reported below.

Our analysis confirms the presence of an underdeveloped financial system in all transition economies specifically in comparison with the OECD countries with high level of income[1]. Second, it also shows a persistent delay of the CIS countries in comparison with the countries

[1]Data refers to high income OECD member aggregate. High income economies are those in which 2004 GNI per capita was $10,066 or more. The economies included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea Republic, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States. *Source:* World Bank (2006). "World Development Indicators."

part of the CEE/SEE group.

Our analysis includes a sample of 22 countries. Such a choice is due to the fact that the same sample is used in our empirical analisys. Specifically, our empirical analysis partially replies the work of Pistor et al. (2000) which involves the same sample of countries. Therefore, in order to make our analysis comparable with the one of Pistor et al. (2000), we select the following 22 countries : Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kyrgystan, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, and Ukraine [2].

In the next sections we will represent and discuss the results of our descriptive analysis. Specifically, section 3.1 analyses the stock markets development while section 3.2 discusses the development of credit markets.

3.1 The development of stock markets

Stock markets and securities markets, in general, are not a novelty in transtition economies. Stock markets, in fact, already existed in the 19th century. This is the case of Poland, for example, where the Warsaw Stock Exchange, built in 1871, was the first stock market all transition economies ever had.

During the socialism, however, these markets were closed and only once the process of transition from plan to market began, already existing and new stock markets emerged, leading most of transition economies to have securities markets in a short time.

These markets born after the process of privatization of public firms which was oriented to reduce the strong presence of the executive in the companies' management.

The methods of privatization used to this purpose were essentially three: voucher privatization, direct sales to strategic investors, and management - employee buyout.

[2]Countries belonging to the CEE/SEE group are: Albania, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Hungary, Latvia, Lithuania, Polonia, Romania, Slovakia, and Slovenia. Countries belonging of the CIS group are: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgystan, Moldova, Russia, and Ukraine.

Voucher privatization represents the main method of privatization linked to the birth of stock markets in transition economies and also the most used method, expecially by the ex Former Soviet Unions (Estrin and Wright (1999)).

This method had the goal of a rapidly mass privatization of state - owned assets and it was characterized by the supply of vouchers working in different ways for different countries.

In particular, voucher privatization sometimes occurred as a means of restitution for those who had had assets seized under communism. In this case vouchers were coupons, which could be freely traded in the market. Specifically, it represented the value of that property, seized during the regime, not materially and directely return to their previous owners.

In other cases, investors could bid on shares of a given firm or they had the option or the obligation to invest their vouchers in a private investment fund which could buy and manage shares on their behalf.

Vouchers also had different characteristics from country to country. In some countries they were tradable and could be freely bought and sold; in other countries, instead, they were registered and could not be transferred or done so only under limited circumstances.

In other istances, countries had physical vouchers while in others countries vouchers existed just in the form of bank accounts.

The voucher privatization method is linked to the birth of stock markets in transition economies for two main reasons. First, because it characterized the three principal mechanisms used by companies to get listed. Second, because it explains the past and the present features of stock markets with regard, in particular, to the number of listed firms .

The first mechanism of listing was mandatory and it occurred after the voucher privatization program, involving the transfer among investors of ownership rights to mass privatized companies. Specifically, it concerned countries as Bulgaria, Lithuania, Romania, Czech Republic, Slovakia, FYR Macedonia, and Moldova.

The second method of listing occurred in the form of voluntary initial public offerings (IPO). In some countries, in fact, stock markets emerged by initial public offerings of companies whose

majority ownership was sold to strategic investors. This happened in countries such as Croatia, Hungary, Latvia, Poland, Estonia, and Slovenia.

A third kind of listing method was adopted by countries belonging to the CIS group as Armenia, Azerbaijan, Kazakhstan, Russia, Ukraine, Uzbekistan, and Kyrgyzstan. These countries adopted a method which was in the middle with respect to the previous ones. All these countries, in fact, had voucher privatization but, in some cases, the initial exchange of voucher shares took place off the stock markets. In other istances, some companies which had mass privatization were listed, but such listing was not mandatory as for companies which used the first mechanism of listing we described before.

These different mechanisms of listing are important in order to explain some current features of stock markets in transition economies and in particular with regard to the number of listed domestic companies[3].

Figure 3.1 shows the average *number of listed companies* from 1991 to 2004 for each of the three method of listing.

Figure 3.1 shows that the *number of listed companies* which followed the mandatory listing, after the voucher privatization programs, raises from the beginning of the transition untill 1997, year in which the *number of listed companies* experienced a dramatic reduction.

The reasons of such a reduction are essentially related to the legal framework which characterized the mandatory listing process resulted from the mass privatization programs. The aim of this method of privatization, was a rapidly ownership transformation of companies operating during the socialist regime. Therefore, the legal framework was intentionally left soft until the point that some countries did not have a supervisory body overseeing stock markets.

This soft legal framework determined two important effects which could explain the drop of the *number of listed companies* in 1997. First of all, it determined the listing of firms characterized by a low level of liquidity. However, the illiquidity forced these companies to get

[3]Listed domestic companies are the domestically incorporated companies listed on the country' s stock exchanges at the end of the year. This indicator does not include investment companies, mutual funds, or other collective investment vehicles. *Source:* World Bank (2006). "World Development Indicators."

delisted some years later the beginning of transition; consequently we observe a decrease in the *number of listed companies* in the markets. Second, given such a weak legal environment, foreign investors became less willing to invest in companies of transition economies; the latter consequently lost one of the principal motivation to get listed.

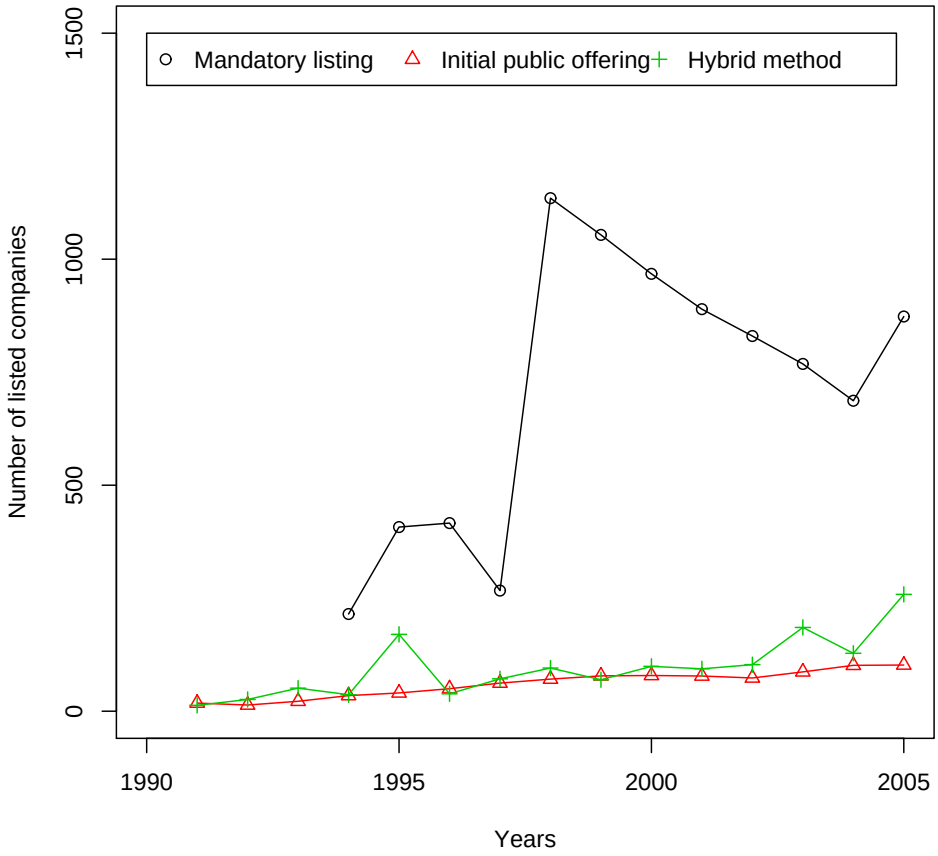

Figure 3.1: *Number of listed companies* for each method of listing (1991 - 2005). *Source:* World Bank (2006). "World Development Indicators."

But the *number of listed companies* also decreased for some specific characteristics of markets which make not convenient for firms to be publicly traded. First of all, the listing process made companies less likely to be able to avoid paying taxes. Second, the cost of external capital was quite high compared to the cost of bank credit, expecially in those countries where firms could lobby politicians for directed credit. Third, the disclosure rules operating in stock markets

made it difficult for firms to conduct non - market based transactions[4].

However we can observe in Figure 3.1 that in 1998 the average *number of listed companies*, related to the first method, experiences a positive peak and begins to decrease one year later in 1999. This trend seems ended in 2005, year in which the *Number of listed companies* starts, once again, to increase.

Considering the other two methods of listing, we observe a *number of listed companies* lower than the one concerning the mandatory listing. And this because, as observed before, most part of transition economies used voucher privatization as preferred method of privatization. Differently from the latter method, direct sales to strategic investors and management - emplyee buyout determine a trend in the number of listed company which is continuosly increasing, from 1994 and 1996,and which never show dramatic negative peaks.

In literature stock markets development is usually measured by the *stock market capitalization to GDP* ratio [5].

In Figure 3.2 we represent the dynamic of the average value of *stock market capitalization to GDP* ratio with respect to OECD countries and economies in transition. We can observe, in particular, how the stock markets of transition economies are still underveloped in comparison with the ones of the OECD group, showing a persistent lower value of the variable examinated during all the period.

In particular, the distance between transition economies and OECD countries remains constant at the beginning and at the end of the period. The proportion between the level of *stock market capitalization/GDP* of transition economies and the one of the OECD countries is equal, respectively, to: 10.01% (beginning of the period)and 10.14% (end of the period). This result highlights that no improvements occur during the period with regard to the development of stock markets in transition economies[6].

[4] Claessens et al. (2000).

[5] Stock market capitalization of listed companies is the share price times the number of shares outstanding. *Source:* World Bank (2006). "World Development Indicators."

[6] We define the distance between OECD countries and transition economies as follows: stock market capitalization to GDP (related to transition economies)/stock market capitalization to GDP (related to OECD countries).

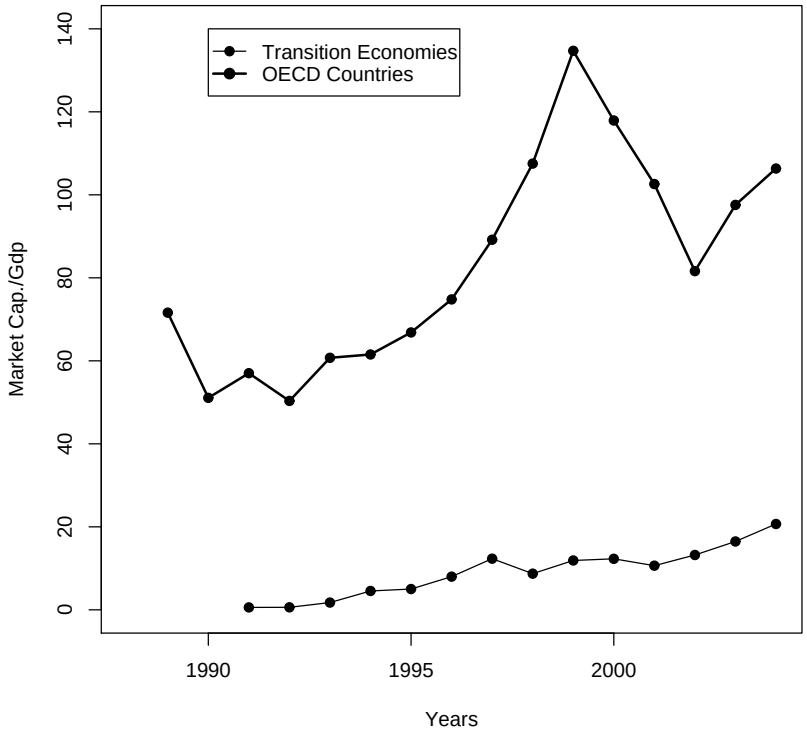

Figure 3.2: *Stock market capitalization to GDP* ratio. Comparison between OECD countries with high level of income and transition economies (1989 - 2004). *Source:* World Bank (2006). "World Development Indicators."

The dynamic of *stock market capitalization to GDP* ratio concerning the whole sample of the 22 transition economies is represented in Figure 3.3. Figure 3.3 shows, essentially, an increase of the ratio over time and a better performance of the CEE/SEE countries in comparison with the CIS ones[7].

In particular, the average value of the *stock market capitalization to GDP* ratio for the period 1989 - 1998 is equals to 8.04% for the CEE/SEE countries and to 4.27% for the CIS countries. This distance seems to remain costant in the period 1998 - 2004. In fact, CEE/SEE countries show an average value of 15.04% while CIS countries of 8.72%.

In addition, we see that from 2002 three different patterns of development are followed by

[7]Countries belonging to the CEE/SEE group are represented by the following codes: BGR (Bulgaria), HRV (Croatia), CZE (Czech Republic), EST (Estonia), MKD (FYR Macedonia), HUN (Hungary), LVA (Latvia), LTU (Lithuania), POL (Polonia), ROM (Romania), SVK (Slovakia), SVN (Slovenia). Countries belonging to the CIS group are represented as follows: ARM (Armenia), AZE (Azerbaijan), Belarus (BLR) GEO (Georgia), KAZ (Kazakhstan), KGZ (Kyrgystan), MDA (Moldova), RUS (Russia), UKR (Ukraine).

three different groups countries. Figure 3.3 shows that Estonia (EST) and Russia (RUS) have the highest value of the *stock market capitalization to GDP* followed by a second group of countries which concerns: Croatia (HRV), Czech Republic (CZE), Hungary (HUN), Lithuania (LTU), Moldova (MDA), Polonia (POL), and Slovenia (SVN). The third group of countries which lags behind involves: Armenia (ARM), Azerbaijan (AZE), Bulgaria (BUL), FYR Macedonia (MKD), Georgia (GEO), Kazakhstan (KAZ), Kyrgystan (KYG), Latvia (LVA), Romania (ROM), Slovakia (SVK), and Ukraine (UKR). All the CIS countries belong to this third group confirming their delay in the development of the stock markets.

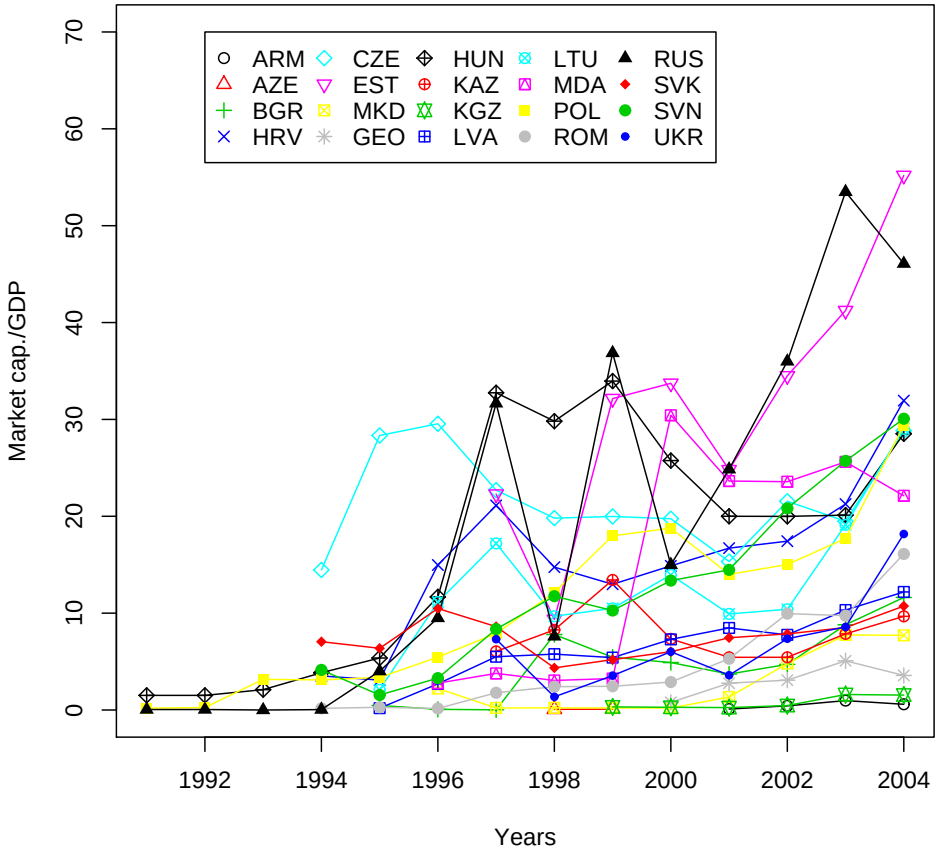

Figure 3.3: Time series of *stock market capitalization to GDP* ratio (1991 - 2004). *Source:* World Bank (2006). ”World Development Indicators.”

Another measure of stock markets development is the *stock market turnover ratio*.[8] Figure 3.4 provides a comparison between OECD countries and transition economies. Transition economies perform worst than OECD countries, showing less liquid stock markets. Claessens et al. (2000) find that the lower value of the *stock turnover ratio* could be due to the high concentration of ownership of most companies, the relatively limited free float, and the international migration of trading among large firms the reasons of such a lower value.

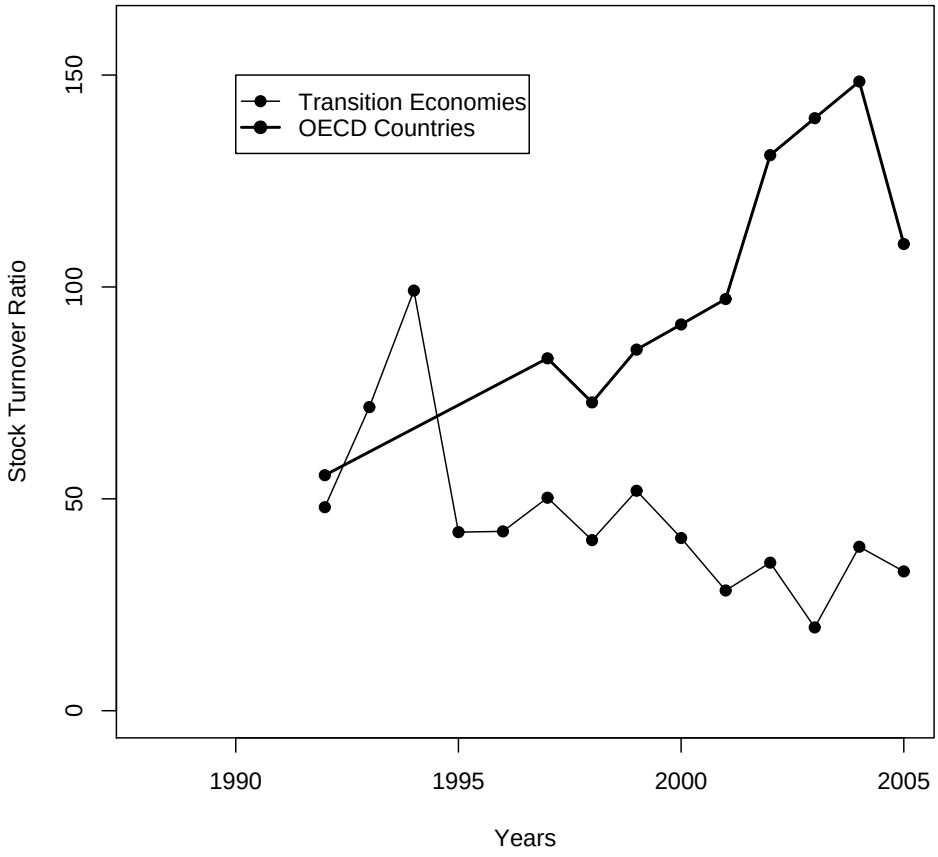

Figure 3.4: *Stocks traded turnover ratio*. Comparison between OECD countries with high level of income and transition economies (1989 - 2005). *Source:* World Bank (2006). "World Development Indicators."

With regard to the performances of each country, Figure 3.5, we see on average, a low value of the stock turnover ratio. In addition, there is no evidence of any effect of polarization between

[8]Stock traded turnover ratio is the total value of shares traded during the period divided by the average market capitalization for the period. Average market capitalization is calculated as the average of the end - of - period values for the current period and the previous period.*Source:* World Bank (2006). "World Development Indicators."

CEE/SEE and CIS countries as for the stock market capitalizion to GDP ratio. In fact, both CIS and CEE/SEE countries display a low value of the stock turnover ratio.

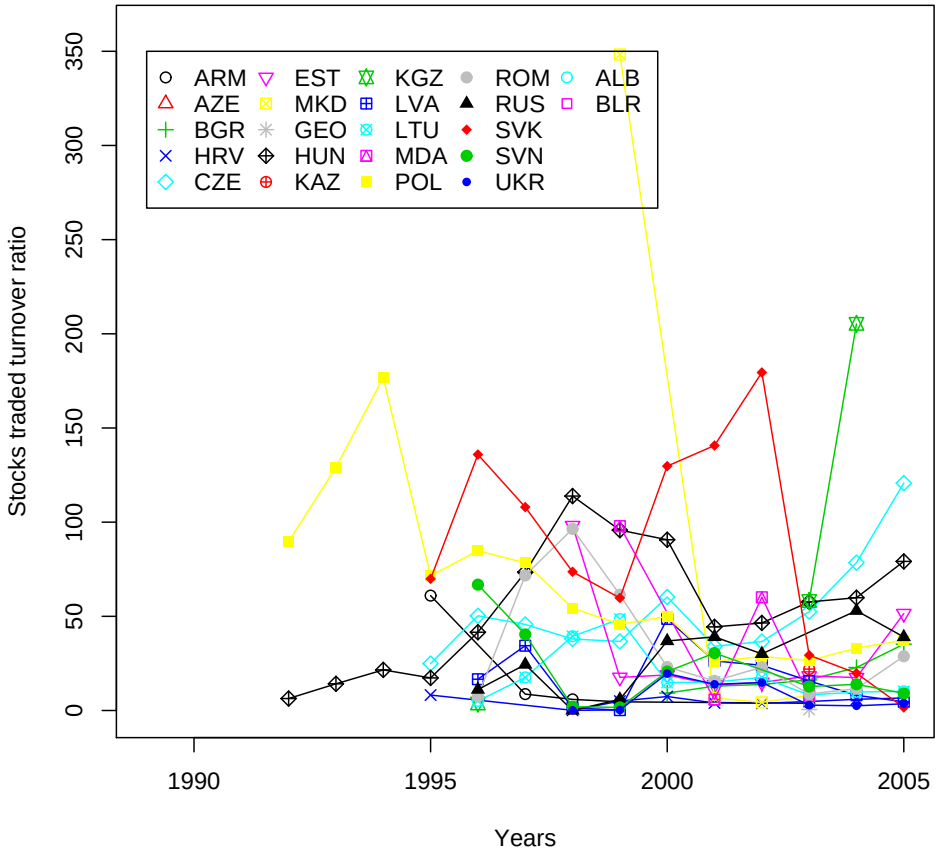

Figure 3.5: Time series of *stocks traded turnover ratio* (1989 - 2005). *Source:* World Bank (2006). World Development Indicators."

A particular path is shown by Macedonia (MKD), which had in 1999 the highest value of the ratio. In this year the *stock turnover ratio* was equal to 348.30%. A plausible reason of such a high value could be referred to the mass privatization programs implemented in Macedonia. In 1999, in fact, no new companies got listed on the official markets. In addition, the low liquidity levels in securities trading of the two existing listed companies made the stock exchange totally irrelevant for trading companies as an institution through which they may raise external finance. Under these conditions, the stock exchange became more important for the stockholders who, through the exchange wanted to provide liquidity for their own shares acquired during the pri-

vatisation process. Hence, the basic feature of the trading conducted on the stock exchange in 1999 was the transfer of ownership of privatised trading companies.
However in 2000 the crisis with Kosovo made Macedonia a high risk country for investements, consequently determining a dramatic drop of the value of the *stock turnover ratio* from a value of 348.30% to a value of 6.6%[9].

3.2 The development of credit markets

The main variable scholars take into account to measure the development of the credit markets is represented by the ratio of *domestic credit provided by banking sector to GDP*[10][11]. This ratio is, in fact, a plausible measure of the overall ability of the private sector to access debt finance. The choice to consider the whole private sector rather than just corporation is motivated by the fact that in transition economies there is a large number of small enterprises whose enterpreuners raise money on their personal accounts in order to finance their firms. (See La Porta et al. (1997))

Figure 3.6 shows that transition economies have still underdeveloped credit markets, displaying for all the period, a lower value of the ratio *domestic credit/GDP*, than the one of the OECD countries. Specifically, the distance between the two group of countries seems to be constant at the beginning and at the end of the period. In fact, the proportion between the level of *domestic credit/GDP* of transition economies and the one of the OECD countries is equal, respectively, to: 40.18% (beginning of the period)and 40.16% (end of the period). This result highlights that no improvements occur during the period with regard to the development of stock markets in transition economies[12].

[9] Istituto nazionale per il Commercio Estero (2007).

[10] See, for example, La Porta et al. (1997), La Porta et al. (1998), and Pistor et al. (2000).

[11] Domestic credit provided by banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. *Source:* World Bank (2006). "World Development Indicators."

[12] We define the distance between OECD countries and transition economies as follows: domestic credit to GDP (related to transition economies)/domestic credit to GDP (related to OECD countries).

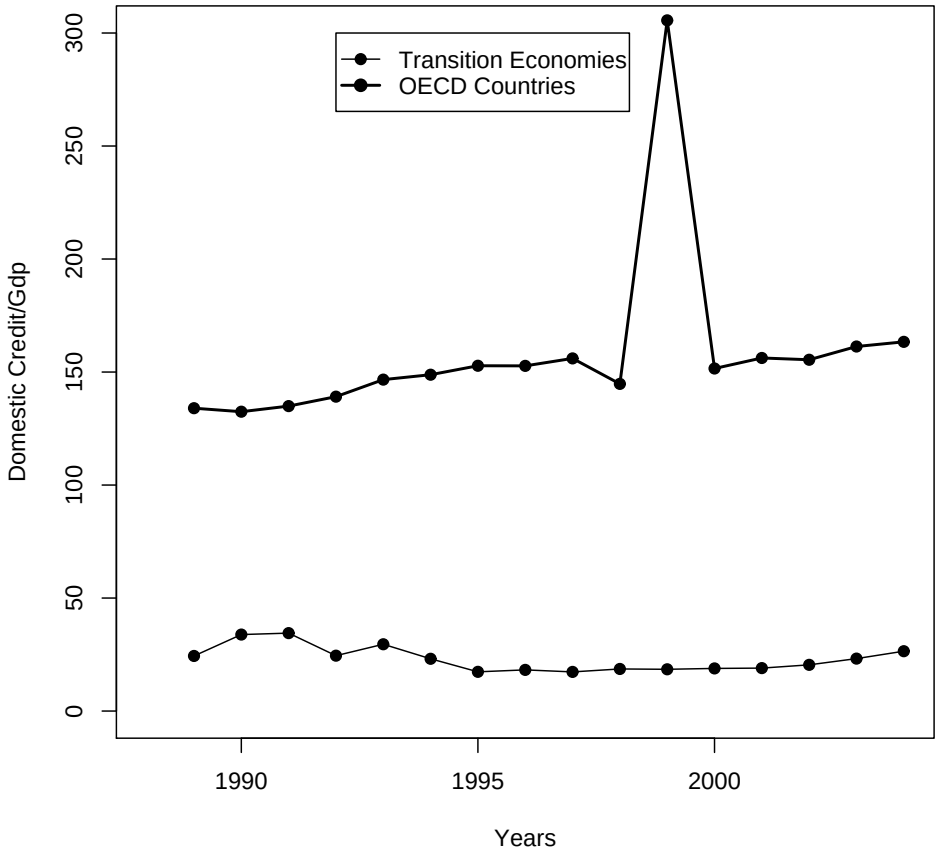

Figure 3.6: *Domestic credit to GDP* ratio. Comparison between OECD countries with high level of income and transition economies (1989 - 2004). *Source:* World Bank (2006). "World Development Indicators."

Even if credit markets are still underdeveloped, if compared with the ones of the OECD countries, transition economies have progressed in recent years. Figure 3.7 shows an increasing trend in the value of the ratio *domestic credit/GDP* for all the countries.

In particular, we observe that from 2002 an effect of polarization occurs. In fact, there are some countries which growth less than others in terms of the ratio *domestic credit/GDP* and which show from 2002 a lower value of this variable. More precisely, these countries are: Albania (ALB), Armenia (ARM), Azerbaijan (AZE), Belarus (BEL), FYR Macedonia (MKD), Kazakhstan (KAZ), and Romania (ROM).

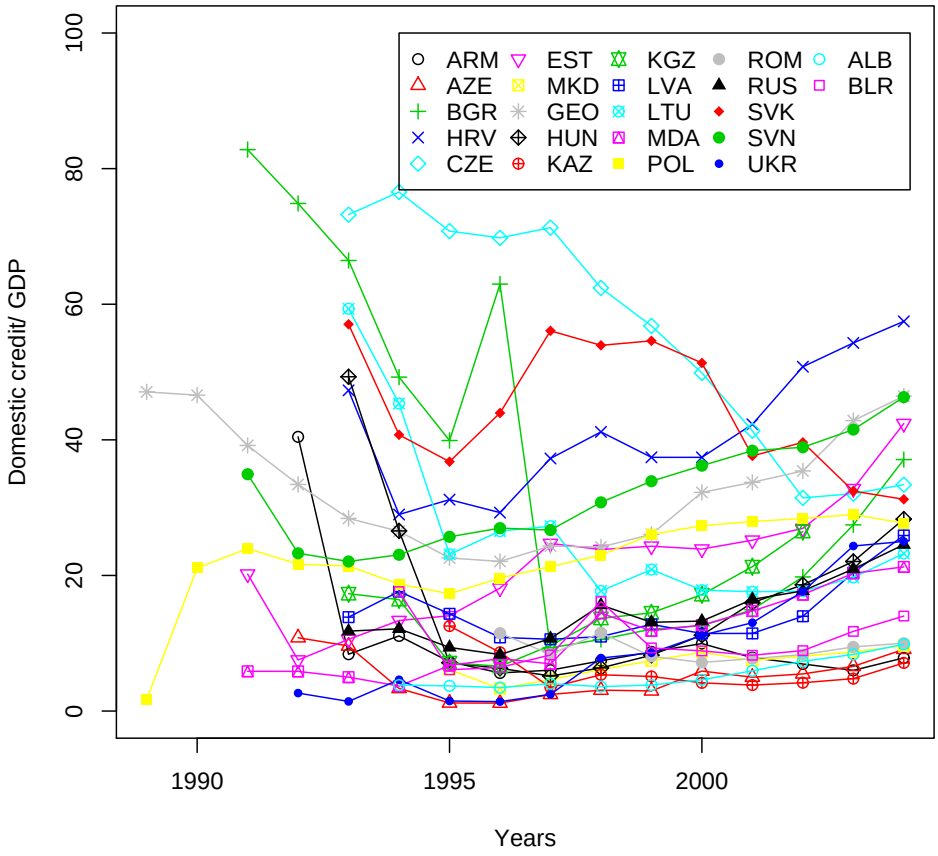

Figure 3.7: Time series of *domestic credit to GDP* ratio (1989 - 2004). *Source:* World Bank (2006). "World Development Indicators."

The report of the World Bank edited in 2002 justify the higher value of the ratio *domestic credit to GDP* of some countries with the higher percentage of *bank assets helded by the state* shown by these countries.

Figure 3.8 confirms in part the positive relationship between the level of the *domestic credit to GDP* ratio and the percentage of the *bank assets helded by the state* [13]. In fact, there are some countries which show high values for both the variables we mentioned above. Specifically, these countries are: Bulgaria (BGR), Croatia (HRV), Czech Republic (CZE), Lithuania (LTU),

[13]The variable we used to measure the presence of the state in banks ownership is the "Asset share of state - owned banks". It represents the share of majority state - owned banks assets in total bank sector assets. The state includes the federal, regional and municipal levels, as well as the state property fund and the state pension fund. State - owned banks are defined as banks with state ownership exceeding 50 per cent, end-of-year.*Source:* EBRD (2007). Structural change indicators. http://www.ebrd.com/country/sector/econo/stats/index.htm

Slovakia (SVK), and Slovenia (SVN). In the vein of the World Bank 's report, these countries show high levels of credit markets development because having banks still largely state - owned can rely on the conspicuous loans granted to their traditional clients represented by large and semi - privatized enterprises.

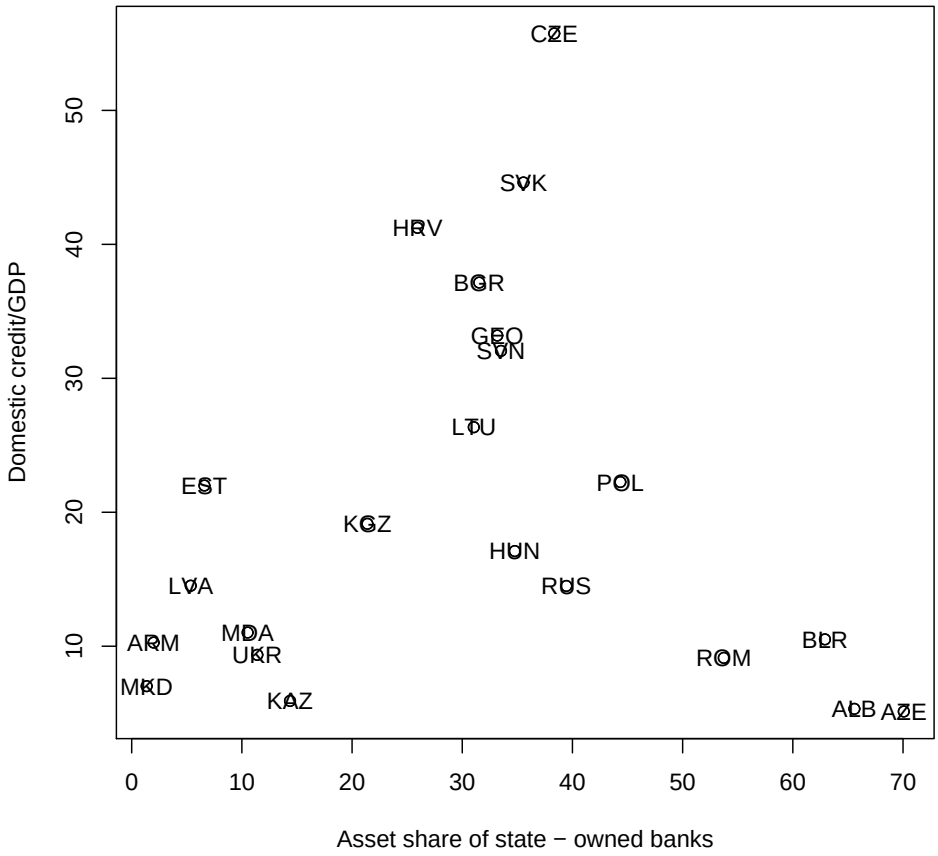

Figure 3.8: Relationship between the variables *domestic credit to GDP* ratio and *asset share of state - owned banks* (1989 - 2005). *Source:* World Bank (2006). "World Development Indicators." - EBRD (2007).

However this relationship is not so robust as it seems. In fact, if there are some countries for which these relation occurs, there are some others for which it does not occur. In fact, if we consider those countries having a low value of the ratio *domestic credit to GDP* we observe that they also show a strong presence of the state in the banks' ownership. More precisely, we refer to: Albania (ALB), Azerbaijan (AZE), Belarus (BEL), and Romania (ROM).

Figure 3.9 and Figure 3.10 show the evolution over time of the variable *asset share of state* -

owned respectively for each of the transition economies and for the average value of the whole sample.

The most important finding is a relevant decrease in the percentage of the bank - assets owned by the state.

This reduction of the presence of the state in the banks' ownership goes with an increasing presence of the foreign investors in the banks equity, as Figure 3.11 and 3.12 show[14].

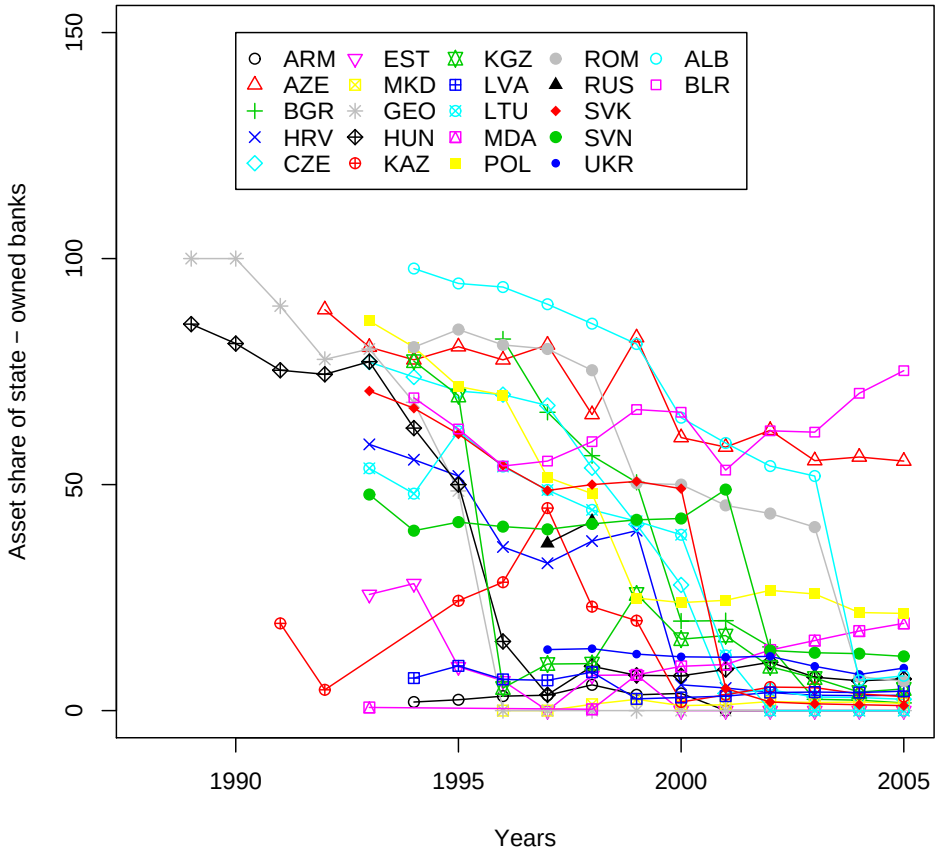

Figure 3.9: Time series of *asset share of state - owned banks* (1989 - 2005). *Source:* EBRD (2007).

[14]The variable we use to measure the presence of foreign investors in banks' ownership is the "asset share of foreign - owned banks" which measures the share of total bank sector assets in banks with foreign ownership exceeding 50 per cent, end - of - year.*Source:* EBRD (2007.) Structural change indicators. http://www.ebrd.com/country/sector/econo/stats/index.htm

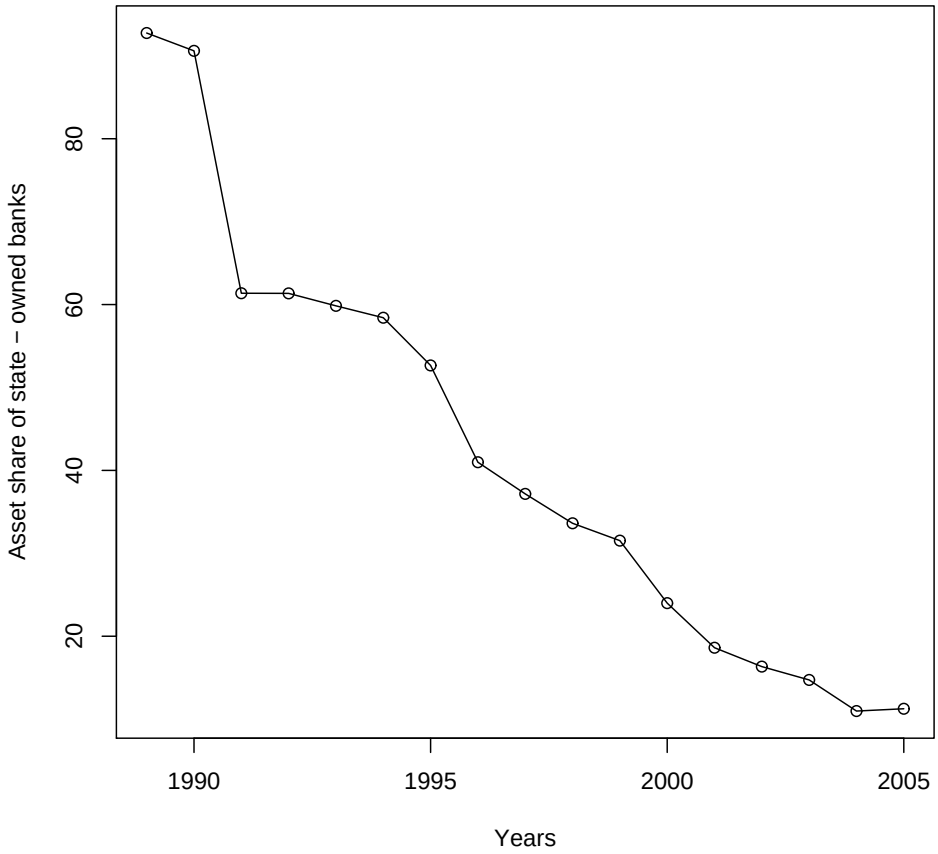

Figure 3.10: Aggregate *asset share of state-owned banks* (1989 - 2005). *Source:* EBRD (2007).

Figure 3.11 shows, in particular, that the presence of foreign investors in the ownership structure of transition economies banks is progressively increasing for all the countries. However, it also shows that in 2005 two different groups of countries follow two different patterns with regard to the openess toward foreign investors. In particular, there are some countries that show no improvements with the regard to this aspect. Specifically, these countries are: Albania (ALB), Azerbaijan (AZE), Hungary (HUN), Lithuania (LTU), Romania (ROM), and Slovenia (SVN).

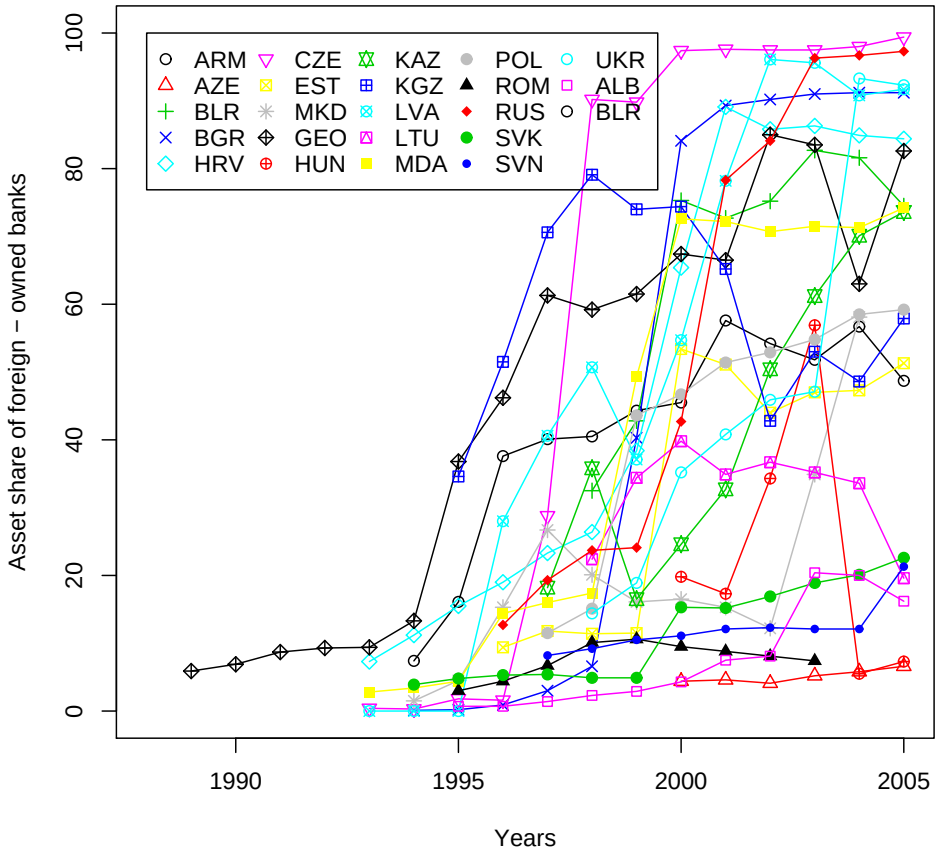

Figure 3.11: Time series of *asset share of foreign - owned banks* (1989 - 2005). *Source:* EBRD (2007).

A special attention deserves the relationship between the level of *domestic credit to GDP* ratio and the percentage of *banks' assets owned by foreign investors*. We highlighted above that countries having a strong presence of the state in the banks' ownership also show high level of credit markets development. However, Figure 3.13 shows that most of those countries (excepted Slovakia) also have a relevant presence of the foreign investors in the ownership structure of the banks.

Specifically, we observe that Bulgaria (BGR), Croatia (HRV), Czech Republic (CZE), Lithuania (LTU) and Slovakia (SVK) show high levels of both the variables *domestic credit/GDP* ratio and *asset share of foreign - owned banks*.

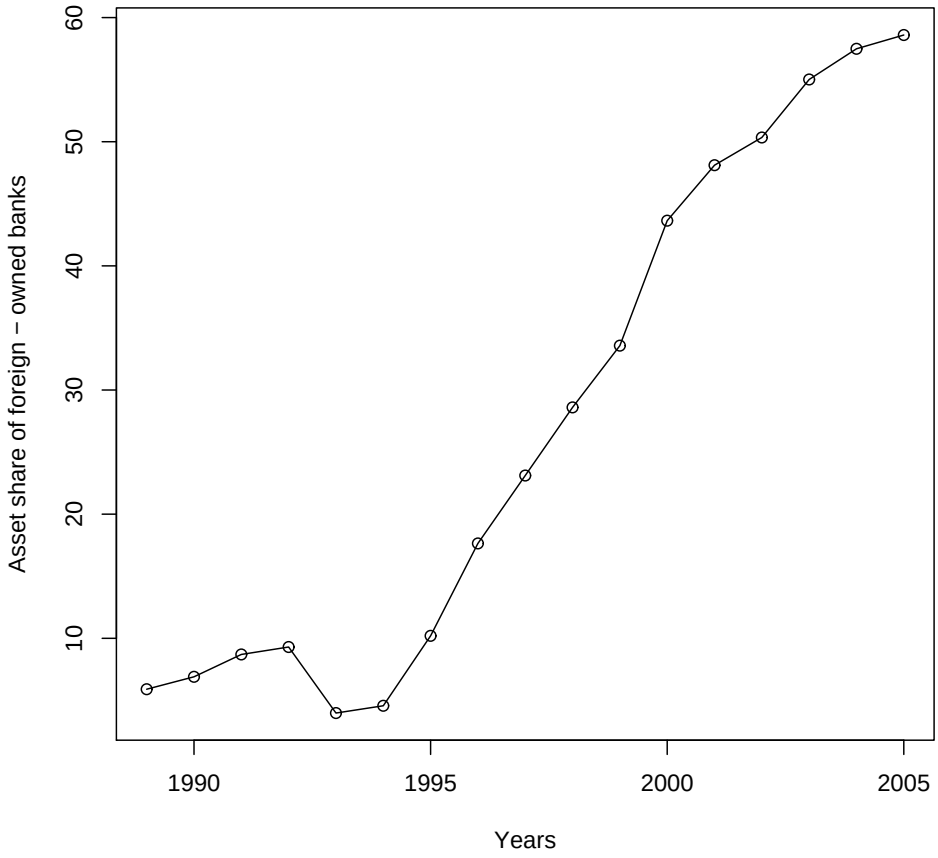

Figure 3.12: Time series of *asset share of foreign - owned banks* (1989 - 2005). *Source:* EBRD (2007).

The positive relationship between the level of *domestic credit to GDP* ratio and higher level of *foreign ownership* showed by some transition economies, allows us to do an important consideration. More developed credit markets are associated not only with the state ownership of banks' assets but also with the openess toward the foreign investors. Banks bought by foreign investors, in fact, applied to their borrowers the hard budget constrains imposed on them by their headquarters. Consequently, these financial restructuring efforts have been associated with faster growth of financial intermediation to new private clients, showing that restructuring efforts and developing financial sectors can go hand in hand (World Bank (2002)).

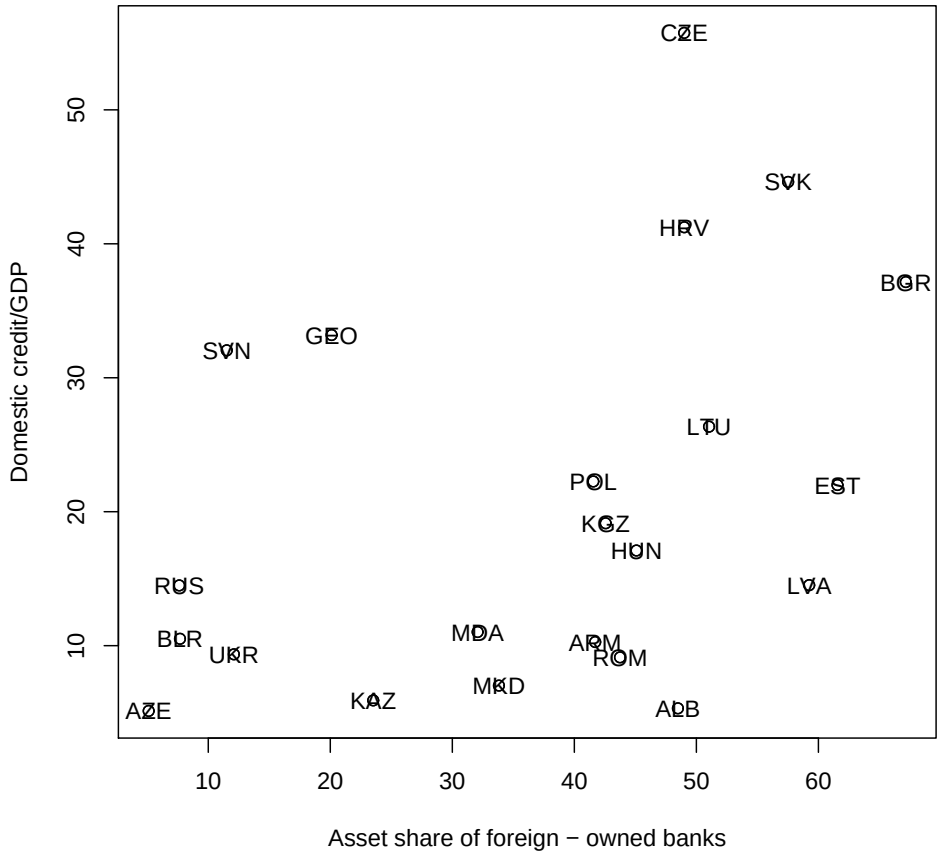

Figure 3.13: Relationship between the variables *domestic credit to GDP* ratio and *asset share of foreign - owned banks* (1989 - 2005). *Source:* World Bank (2006). "World Development Indicators." - EBRD (2007).

The last variable we consider in order to complete our descriptive analysis of the banking sector in transition economies is the *number of banks* operating in the country' s territory.[15]

[15]Number of banks represents, exactly, the number of commercial and savings banks, excluding co-operative banks. *Source:* EBRD (2007.) Structural change indicators. Structural change indicators. http://www.ebrd.com/country/sector/econo/stats/index.htm

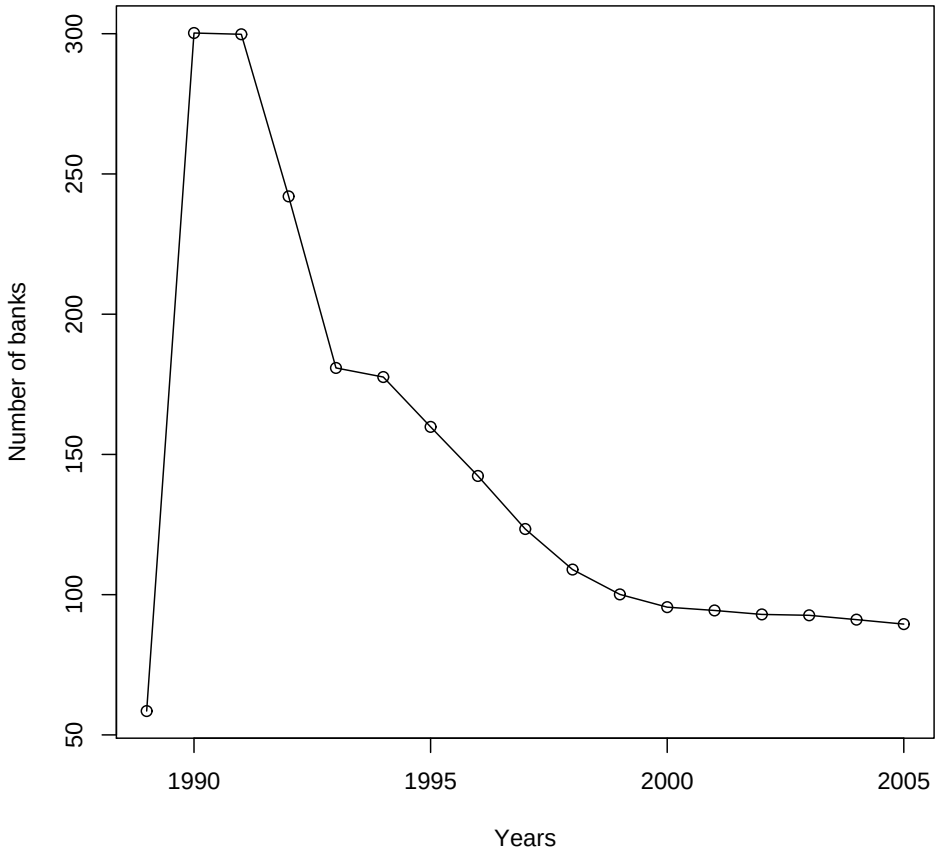

Figure 3.14: Aggregate *number of banks* in transition economies (1989 - 2005). *Source:* EBRD (2007).

Figure 3.14 and 3.15 show that the *number of banks* operating in transition economies follows a decrising trend over time. In particular, this variable experienced a positive peak in 1990 when the *number of banks* exploded. The proliferation of the *number of banks* was certanly the consequence of the liberalization of the banking sector and also of a not accidental soft legal framework which allowed the free entry of a large *number of banks*.

The *number of banks*, however, starts to decrease some years later essentially because of problems causated by bad loans. Many banks in fact got into trouble, suffering from bad loans inherited from the socialist banks and from defaults on new loans. In addition, banks had little incentives to avoid giving bad loans, partly because they did not face hard budget constraints, accentuating by this way, this negative trend.

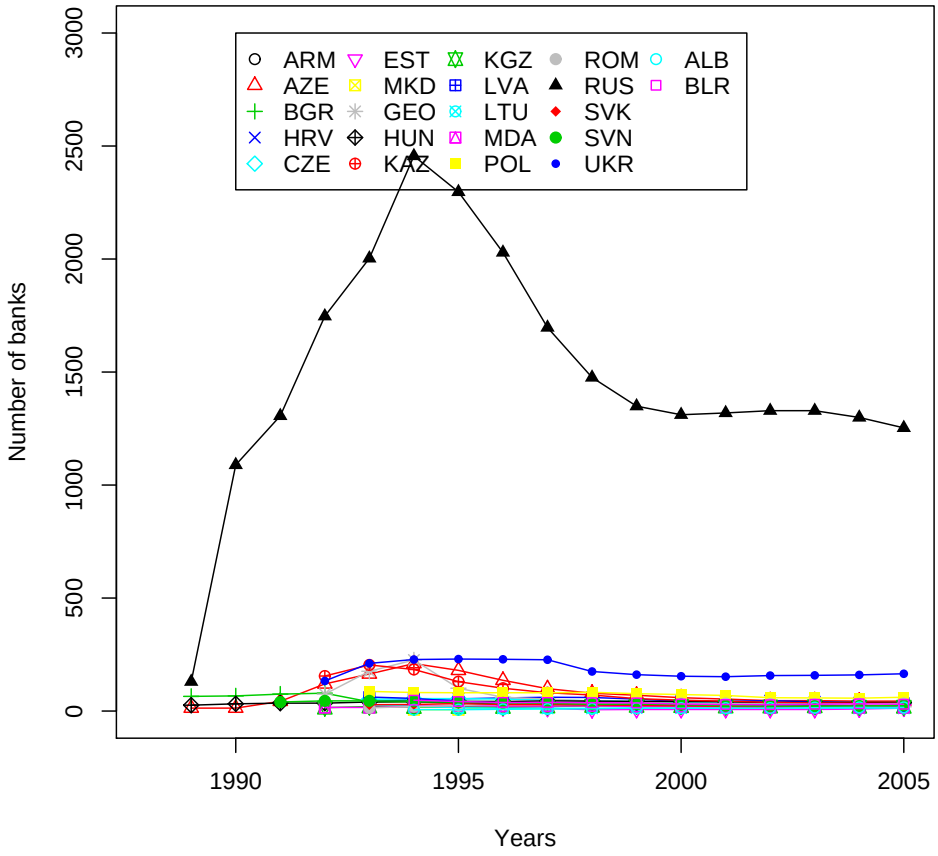

Figure 3.15: Time series of *number of banks* (1989 - 2005). *Source:* EBRD (2007).

The main results emerging from this descriptive analysis is that transition economies still have underdeveloped financial markets. In addition, it highlights that CEE/SEE and CIS countries follow two different paths of development, with reference in particular to the variables *domestic credit to GDP* ratio and *stock market capitalization* to GDP ratio. In recent years, however restructuring efforts have shown their positive consequences on financial markets development compensating by this way the influence of the initial conditions on transition economies' financial system. But, overall, highliting the importance of reforms and restructuring policies in order to improve financial markets dynamics in these countries.

Chapter 4

Investor protection and financial markets development in transition economies. An empirical analysis

In this chapter we report an empirical analysis on the relationship between legal protection of outsider investors and financial markets development in transition economies.

Section 4.1 summarizes the main findings of La Porta et al. (1997) and (1998), which are the key references of the literature concerning the legal approach to corporate finance.

Section 4.2 is dedicated to the discussion of our empirical analysis with reference, in particular, to the database we use and to the main results we find. Appendix A shows the table of the correlations between the variables included in our regressions; Appendix A provides the details concerning the *EBRD index of enterprise reform* and the *EBRD index of reform of non - bank financial institutions* used in order to assess the quality of shareholder rights over time.

4.1 The pioneristic work of La Porta et al. (1998)

The main papers related to the relationship between legal protection of outsider investors and financial markets development are due to La Porta et al. (1997) and (1998). In their pioneristic work La Porta et al. (1998) highlight that countries having different legal origins show differences in the quality of the legal protection of outsider investors.

In particular they consider a sample of 49 countries and divide it into 4 different groups, each one representing a diverse legal origin: the French - civil - law, the German - civil - law, the Scandinavian and the common - law countries. The first 3 groups are part of the big and more general civil - law family.

Civil - law countries are characterized by a legal system which essentially derives from written sources of law; differently from the common - law family which is formed by countries whose sources of law are represented by judges' sentences resolving specific disputes. This group involves not only England but also countries having laws modeled on English laws as Canada, United States, Australia, etc. [1]

The criterions La Porta et al. (1998) use in this classification concern "(1) the historical background and development of the legal system, (2) theories and hierarchies of sources of law, (3) the working methodology of jurists within the legal system, (5) the legal institutions of the system, and (6) the divisions of law employed within a system." (For more details, see La Porta et al. (1998).)

The French - civil - law countries are mainly characterized, in the sphere of the *commercial laws*, by adopting the Napoleonic commercial code of 1807. This code was adopted not only by French but also by Belgium, the Netherlands, Italy, part of the Poland, and western regions

[1] In details, the composition of the four legal families is the following. French - civil - law countries: Argentina, Belgium, Brazil, Chile, Colombia, Ecuador, Egypt, France, Greece, Indonesia, Italy, Jordan, Mexico, Netherlands, Peru, Philippines, Portugal, Spain, Turkey, Urugay, and Venezuela. German - civil - law countries: Austria, Germany, Japan, South Korea, Switzerland, and Taiwan. Scandinavian - origin countries: Denmark, Finland, Norway, and Sweden. Common - law countries: Australia, Canada, Hong Kong, India, Ireland, Israel, Kenya, Malaysia, New Zealand, Nigeria, Pakistan, Singapore, South Africa, Sri Lanka, Thailand, United Kingdom, United States, and Zimbabwe.

of Germany. In the colonial era it was also diffused in countries as Indochina, sub - Saharan Africa, and French Caribean islands.

The German - civil - law countries refer to the German commercial code written in 1897 after the Bismarck' s unification of Germany. It had a narrower circulation than the French code, even if it had an important influence on the legal framework of Greece, Austria, Czechoslovakia, Hungary, Korea, Switzerland, Yugoslavia, Japan, and Italy.

The Scandinavian family is usually viewed as a part of the civil - law family. The codes adopted by the Nordic countries go back to the eighteen century but they are not used anymore. The Scandinavian - civil - law countries are kept in a separate sample from the others because they have laws "similar to each other but distinct from the others"[2].

Given such a classification La Porta et al. (1998) show in particular that common - law countries provide the best protection of minority shareholder rights while the French and the German - civil - law countries have the worst one. In particular, the French - civil - law countries show also the worst legal framework in the defence of creditor claims. The common - law countries are the best in the protection of creditor rights too. In the civil - law family the best protection of creditor rights derives from the German - civil - law countries which are second compared with all the other three groups. The Scandinavian countries rank second in the protection of minority shareholder rights and third in defending creditors.

Such a ranking is the result of an exhaustive extimation of the quality of shareholder and creditor rights law provides in those countries.

Taking into account this measurement is important for many reasons. First, in order to understand the results highlighted by La Porta et al. (1998) and (1997). Second, in order to interpret the finding the literature on corporate finance come to after the pioneristic work of La Porta et al. (1998). The present work is, in fact, inspired by the paper of Pistor et al. (2000) which extends to transition economies the work of La Porta et al. (1998).

In order to assessing the quality of the law on the book in protecting minority shareholder

[2] La Porta et al. (1998).

and creditor rights, La Porta et al. (1998) consider different variables as proxies of the strength of the legal framework in defending outsider investors. In particular, for each variable they give a score which fluctuates in different ranges for different variables. Usually, higher is the score, higher is the quality of the law in defending the right considered. Authors assess these rights for all the countries part of a certain legal family. The average of the scores given to each country represents the score of the legal family they belong to.

Minority shareholder rights

Referring to minority shareholders[3], the first issue taken into account by La Porta et al. (1998) is the existence and the treatment in the commercial code of a given country of the principle of the *one share - one vote*. This principle is characterized by attributing to each shareholder one and only one vote in the stakeholders' meetings indipendently of the percentage of equity he/she holds. In particular, authors give a score of 1 to those countries which respect such a principle, in a strict meaning. Differently they give a score of 0 if a country does not use this principle in a strict meaning adopting instead measures as the issuing of non - voting shares, the presence of founders' shares with extremely high voting rights, or of shares whose votes increase when they are held longer. In other instances, companies can also restrict the total number of votes that any given shareholder can exercise regardless of how many votes he/she controls.

In addition to the *one share - one vote* principle La Porta et al. (1998) also analyse six rights and summarize them into a variable called *antidirector rights*. The proxy *antidirector rights* is defined as a measure of "how strongly the legal system favors minority shareholders against managers or dominant shareholders in the corporate decision - making process, including the voting process"[4]. In particular the proxy antidirector rights is composed by six different variables each one representing one specific minority shareholder right. Each variable can take a score of 1 or 0. Specifically, the score is equals 1 if the right, described by the variable, is

[3]Minority shareholders are defined as those shareholders who own 10% of share capital or less.
[4] La Porta et al. (1998).

provided by the law on the book of the country considered, and 0 otherwise. The score of the proxy *antidirector rights* is given by the sum of all the six components' scores. Therefore it can take a score which varies from 0 to 6. The six rights considered are, in detail, the following:

- *proxy vote by mail*: this variable takes value 1 if the law or the company allows shareholders to mail their proxy vote to the firm, making easier, for them, to exercise their vote. It takes value 0 if the law or the company requires shareholders to be present at the shareholders' meeting or to send an authorized representative to be able to vote by proxy. In the view of authors this make difficult for shareholders to exercise their vote and influence, by this way, the decision - making process of the company.

- *block of shares before meetings*: this component has a value of 0 if the law or the company requires that shareholders deposit their shares with corporate or a financial intermediary some days before the shareholders' meeting. Once deposited, shares are kept in custody until a few days after the meeting. This procedure, on one side, does not allow shareholders to sell their shares for several days around the time of the meeting and, on the other side, hinders shareholders in the exercise of their vote. Requiring the deposit of the shares, law keeps from voting stockholders who do not bother to go through this procedure. This variable, instead, takes value 1 if the deposit of the shares is not required by the commercial code of the country or by the company' s regulation.

- *cumulative voting for directors and mechanisms of proportional representation on the board*: this variable takes value 1 if the commercial code or the company law allows minority shareholders to cumulate all their votes for one candidate standing for the election to the board of directors. In addition it can take value 1 if minority shareholders can appoint a proportional number of directors to the board through some mechanisms of proportional representation. All these procedures have the aim to give more power and more protection to minority shareholders by allowing them to put their representatives on board of directors. This third component takes value 0 if the company or the commercial

code does not provide these measures.

- *legal mechanisms against oppression by directors and blockholders*: equals 1 if the company law or the commercial code allows minority shareholders to ask for judges' help to challenge the decisions both of the board of directors and the assembly. In alternative or in addition, law can attribute to minority shareholders the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes such as mergers, asset dispositions and modifications in the articles of incorporations. This variable takes value 0 otherwise.

- *preemptive rights*: this variable takes value 1 if the commercial code or the company law grants shareholders a preemptive right to buy new issued shares. This right can be waived only by a shareholder vote and has the aim to ensure shareholders from the diluition of the equity expecially if shares are issued to favored investors at below - market prices. The variable takes value 0 if the preemptive right is not provide by company' s law or by the commercial code of the country considered.

- *percentage of equity required to call an extraordinary shareholders' meeting*: this variable takes value 1 if the percentage of equity needed to call an extraordinary meeting is at or below the countries' sample median of 10%. It takes value 0 otherwise.

The last proxy which La Porta et al. (1998) take into account in addition to the *antidirector rights* index, is the right to a *mandatory dividend*. This variable takes value 0 if the commercial code or the company' law does not mandate firms to distribute a certain fraction of their declared earnings as dividens. In the opposite hypothesis, this variable takes a value equals to the percentage of the declared earnings companies are mandated to pay out as dividens among ordinary shareholders. However, some authors observe how this is not a restrictive measure as it looks. The mandatory dividend right, in fact, "may be a legal substitute for the weakness of other protections of minority shareholders" and this because "earnings could be misrepresented

within the limits allowed by the accounting system"[5].

Creditor rights

The discussion on creditor rights requires some cautions. First, there may be different kinds of creditors having different interests. Consequently, increasing the legal protection of a given group of creditors could reduce the legal protection of the rights of another different group.
The main distinction concerning creditors is between *secured* and *unsecured creditors* and between *senior* and *junior creditors*. A *secured creditor* is a creditor which has the benefit of a *security interest* over some or all of the assets of the debtor. A *security interest* is a property interest created by agreement or by operation of law over assets to secure the performance of an obligation (usually but not always the payment of a debt) which gives the beneficiary of the *security interest* certain preferential rights in relation to the assets. The rights vary according to the type of *security interest*, but in most cases (and in most countries) the main rights and purpose of the *security interest* is to allow the holder to seize, and usually sell, the property to discharge the debt that the *security interest* secures. Differently, an *unsecured creditor* is a creditor which is not a preferential creditor and which does not have the benefit of any *security interest*s over the assets of the debtor. Referring to the difference between *senior* and *junior creditors*, we have that the first ones are characterized by owning *senior credits*. *senior credits* are the ones that in case of bankruptcy must be repaid before *subordinated credits*, (owned by *junior creditors*), are repaid. In particular, *subordinated credits* are characterized by ranking below all the others loans or securities with regard to claims on assets or earnings. Also known as *junior security* or *subordinated loan*, subordinate credits would not get paid out until after the *senior*' s ones were paid in full.
In case of default, different kinds of creditors can have different rights to defend. In particular, it could happen that *senior secured creditors* have the simple interest to repossess collateral no matter what happens to the firm or to protect their *senior*ity, while *junior unsecured creditors*

[5] La Porta et al. (1998).

have the objective to preserve the firm. An this, in order to get some money back if the firm turns a profit. For this reason, increasing the protection of the rights of a certain group of creditors, could lead to reduce the protection accorded to a different group of creditors.
In order to analyse creditor rights, La Porta et al. (1998) assume, specifically, the perspective of *senior secured creditors*. The reason of this is due "in part for concreteness and in part because much of the debt in the world has that character"[6].

A second issue which has to be taken into account talking about creditors' rights is that there are two different creditor strategies of dealing with a defaulting firm: liquidation[7] and reorganization[8], which require different rights to be effective.

The first creditor right authors take into account is the existence of a *legal reserve* requirement in the legal framework of the country analysed. This measure has the aim to protect those creditors having few other powers by forcing an automatic liquidation before all the capital is stolen or wasted by blockholders and directors. In particular, the legal reserve can be defined as the minimum fraction of the total share capital, mandated by law, to avoid the dissolution of the firm. This variable takes value 0 if the commercial code or the company' s law does not require the measure of the legal reserve. In the opposite case it takes a value equals to the minimum percentage of equity setted as legal reserve.

La Porta et al. (1998) analyse also other four creditor rights and summarize them in a proxy called *creditor rights*. Each of the four variables, representing four different creditor rights, can take a value of 1 or 0. In particular, the score is 1 if the right, described by the variable, is provided by the law on the book of the country considered, and 0 otherwise. Therefore, the proxy creditors' right will take a score which could range from 0 to 4. The rights involved by this proxy are, specifically, the following:

[6] La Porta et al. (1998).

[7] Liquidation refers to the process through which a company is brought to an end, and the assets and property of the company redistributed.

[8] Reorganization is a process designed to revive a financially troubled or bankrupt firm. The reorganization procedure involves the restatement of assets and liabilities, as well as holding talks with creditors in order to make arrangements for maintaining repayments.

- *existence of a measure of automatic stay on secured assets*: this variable takes value 0 if the bankruptcy and reorganization laws, of a given country, impose an automatic stay on the assets in order to prevent *secured creditors* from getting possession of the loan collateral. The aim of this measure is to avoid an automatic liquidation of the firm and to give, also, more protection to *unsecured creditors* and insiders. The variable, instead, takes value 1 if the bankaruptcy and reorganization laws do not impose such a measure.

- *secured creditors are paid first*: this component takes a value of 1 if *secured creditors* are ranked first in the distribution of the proceeds resulting from the disposition of the assets of a bankrupt firm. It takes value 0 in the opposite hypothesis. In particular, when *secured creditors* are ranked behind other types of creditors as government and workers.

- *existence of restriction for going into reorganization*: this variable takes value 1 if the bankruptcy and reorganization laws provide measures as the consent of creditors to file for reorganization. Differently, the variable takes value 0 if laws don't set such a measure.

- *management stay during the reorganization procedure*: this component shows a score of 1 if, during the reorganization procedure, management is not responsable for the operations of the company but an official appointed by the court or by the creditors is. In addition it takes value 1 if debtor does not keep the administration of its property pending the resolution of the reoerganization process. The variable takes value 0 if the opposite hypothesis is verified.

Observing such differences in the law on the book protecting outsider investors, La Porta et al. (1998) investigate if countries having weak rules in defending investors, have effective and substitutive mechanisms of enforcement. In the idea of La Porta et al. (1998), strong instruments of legal enforcement, as active and well - functioning courts, could substitute for weak rules in defending outsider investors. The results of their empirical analysis show, however, that countries having fragile laws on the book not always adopt substitutive mechanisms of enforcement. They find, in particular, that countries having the best rules protecting outsider investors

also have the best mechanisms of enforcement of these rules, while countries with less powerful laws on the book also show ineffective enforcement' s instruments.

The variables they use in ranking legal families, according with their mechanisms of enforcement, are six. Once again, authors assess these variables for all the countries part of a certain legal family. The average of the scores given to each country represents the score of the legal family they belong. The average of these scores allows to rank legal families from the one having the best mechanisms of enforcement to the one having the worst ones. The variables used are the following:

- *efficiency of the judicial system*: this variable represents "an assessment of the efficiency and integrity of the legal environment as it affects business, particulary foreign firms. It may be taken to represent investors' assessment of conditions in the country in question." It takes values from 0 to 10: with lower scores, lower efficiency level.

- *rule of law*: it is an "assessment of the law and order tradition in the country". It can take value from 0 to 6. Lower score, less tradition for law and order.

- *corruption*: it is an "assessment of the corruption in the government. Lower scores indicate that high government officials are likely to demand special payments and illegal payments are generally expected throughout lower levels of government in the form of bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans." Scale from 0 to 6 with lower scores for higher levels of corruption.

- *risk of expropriation*: it represents the "risk of outright confiscation or forced nationalization". It takes value from 0 to 10 with lower scores for higher risks.

- *repudiation of contracts by government*: it is an assessment of the "risk of a modification in a contract taking the form of a repudiation, postponement, or scaling down due to budget cut - backs, indigenization pressure, a change in a government, ora change in

government economic and social priorities". It takes value from 0 to 10 with lower scores for higher risk.

- *accounting standard*: "this index has been created to assess and rating companies' annual reports on their inclusion or omission of 90 items. These items fall into seven categories. More precisely, they are: general information, income statment, balance sheets, funds flow statement, accounting standards, stock data, and special items."

They also study if countries having a soft protection on the book of investors' rights, adopt a further substitutive mechanism in defendending outsiders' claims. They refer to a more concentrated ownership of companies' shares. Given a weak defence of their rights, investors need to possess a large fraction of equity in order to strengthen their control power and to make sure, by this way, they will receive the remuneration of their investment and insiders will not expropriate them.

The empirical analysis of La Porta et al. (1998) show that, in general, the dispersed ownership of corporates' shares is still an *utopia* also in countries having a better legal protection of outsider rights than the others. La Porta et al. (1998) find that, on average, the ownership concentration varies between the 54% and the 34% across the 49 countries they consider. In particular, they find that the legal families having the worst legal protection of outsiders, as the French - civil - law one, also show the highest concentration. However, they also find that countries having a good legal protection of investors, as the Scandinavian and the common - law ones, have an high rate of ownership concentration too.

In addition, authors investigate, with an ordinary least squares regression, which are the principal determinants of the ownership concentration around the 49 countries[9].

Firstly, they find that the minority shareholder protection (measured by the proxy *antidirector rights*) has a negative and statistical significant effect on the ownership concentration. In other words, higher is the protection of minority shareholders, lower is the concentration of the

[9] In particular they do a cross section analysis considering the mean value of the ownership concentration of the 49 countries.

ownership of a given firm. Referring to minority shareholders rights, another important result concerns the role of the accounting standards which have a large effect in explaining the ownership concentration. Well defined accounting standards lead, in the analysis of the authors, to an higher dispersion of the firm' s equity.

The protection of creditor rights (measured by the variable *creditor rights*), instead, does not play a statistical significant role in any directions. La Porta et al. (1998) suggested, concerning the links between ownership concentration and creditor rights, that two kind of dynamics are possible. On one side, when creditor rights are well protected, bank borrowing becomes easier and minority shareholders can free - ride on the monitoring by banks, making dispersed ownership possible. On the other side, easier bank borrowing allows firms to finance their investment' s projects through debt rather than equity, leading to a higher ownership concentration in equilibrium. Concerning the legal protection of creditors, the only variable which has a statistical significant effect is the one representing the legal reserve requirement. In particular, authors find that if a legal reserve is provide by the law, lower is the ownership concentration.

Not sourprisingly, legal origins have not a statistically significant effect in explaining the ownership concentration. This result confirm the one emerging from the ranking of the four different legal families according with the issue of the ownership concentration. As observed before, in fact, if it is true that legal families having the worst protection of outsider investors have also an high ownership concentration, it is also true that the ones having the best protection of outsiders have an high ownership concentration too.

Given these differences in the legal protection of outsider investors, both law on the book and mechanisms of enforcement, within the four legal families, La Porta et al. (1997) investigate its effects on the financial markets' development of the 49 countries belonging to those legal groups.

They take into account several measures of financial markets development, meaning both stock markets and credit marktes. In particular they examine four variables:

- *external capitalization/GNP*: it is the ratio of the stock market capitalization held by mi-

norities to gross national product. The stock market capitalization held by minorities is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non - financial, privately owned dometic firms in a given country. A firm is considered privately owned if the state is not a known shareholder in it.

- *domestic firms/pop*: it is the ratio of the number of domestic firms listed in a given country to its population (in milions).
- *IPOs/pop*: it is the ratio of initial public offerings of equity in a given country to its population (in milions).
- *debt/GNP*: it is the ratio of the sum of bank debt of the private sector and outstanding non - financial bonds to GNP.

La Porta et al. (1997) rank the four legal families with regard to the values that each variable takes in each country..

The results they find are the following. First, common - law countries, having the highest legal protection of minority shareholders and creditors' rights show the highest values, on average, of the three measures of stock market development: *external capitalization/GNP*, *domestic firms/pop*, and *IPOs/Pop*.

Second, more developed credit markets are associated with stronger creditor rights which is showed, as discussed before, by the German - civil law countries. This group, in fact, has the highest mean value of the variable debt/GNP.

The French - civil law family, once again, ranks last both in the development of the stock markets and the credit markets. In particular, we remind, French - civil law countries have the worst legal protection of outsider investors.

Scandinavian countries are, as usual, in a middle way. They rank second in the development of stock markets and third in the development of credit markets, reflecting the same rank in the legal protection of minority shareholders and creditors.

The main result suggested by La Porta et al. (1997) is the existence of a positive relationship between the development of financial markets and the legal protection of shareholder and creditor rights. In particular, they find that countries having better rules protecting outsider investors, than others, show also better performances with regard to the financial markets development. The empirical analyses they did, confirm these results also with respect to the enforcement of these rules, as well as measured by the variable *rule of law*.

These findings represent the starting point of the work of Pistor et al. (2000) which extends to transition economies the analyses of La Porta et al. (1997). In particular, the paper of Pistor et al. (2000) represent the key reference for the present work. Therefore, discussing the pioneristic works of La Porta et al. (1997) and (1998) provide us the main guidelines for the interpretation of the results represented in the next section.

4.2 Empirical analisys

4.2.1 Introduction

La Porta et al. (1997) observe that countries having a stronger legal protection of outsider investors show more developed financial markets than other countries. In particular, they suggest that legal rules can influence the willingness of outsider investors to provide financial resources to firms. Specifically, higher is the protection legal system grants to minority shareholders and creditors, lower are costs at which enterpreuners can raise external finance, promoting the growth of both stock and credit markets. In fact, stronger is the protection of outsider rights lower is the risk of expropriation they will face financing firms. Consequently, they will offer companies better conditions of external finance (in terms of price of shares and cost of debt) encouraging companies to sell more shares and to raise more debt, promoting by this way financial markets development.

The relationship between legal protection of outsider investors and financial markets de-

velopment has been examined, for transition economies, by Pistor et al. (2000). Taking into account a sample of 22 countries[10], they extend the work of La Porta et al. (1997) to the countries of the Central - Eastern and South - Eastern Europe.

Differently from the latter, Pistor et al. (2000) use several and more exhaustive indexes assessing the legal protection of outsider investors, as well as different measures of financial markets development.

However, Pistor et al. (2000) do not find some of the results of La Porta et al. (1997). They find that law on the book does not matter for the development of financial system in transition economies. In particular, they argue that the most important determinant of financial markets development in transition economies is represented by the enforceability of these rules, as measured by the variable *rule of law*.

Rule of law is generically and usually defined as a proxy of the quality of the law enforcement as well as an estimation of the the law and order tradition of a given country. Specifically, the economic literature provides several definitions of *rule of law*. In general, it is defined as the principle through which the power of the state is exercised in an orderly manner and in accordance with the laws setted in the legal system which are enforced in accordance with established procedure.

In addition, some scholars refer to the *rule of law* as the principle for which "law rather than violence is used for contract enforcement"[11].

In other istances, *rule of law* represents "the extent to which agents have confidence in and abide by the rules of society". In particular, it is an index of "the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions, and importantly, the extent to which property rights are protected"[12].

Finally, some scholars suggest that "substance aside, however, the degree to which the society is bound by law, is committed to processes that allow property rights to be secure under legal rules

[10] See chapter 3 for a detailed description of the composition of the sample.
[11] Pistor et al. (2000).
[12] Kaufman et al (2003).

that will be applied predictably and not subject to the whims of particular individuals, matters. The commitment to such processes is the essence of the *rule of law*"[13].

Extending to transition economies the analysis about the relationship between the ability of firms to access external finance and legal protection of outsider investors, is important for many reasons.

First of all, firms operating in transition economies face the problem of substituting government financing with new and different sources of external finance. During the socialist regime, in fact, they did not have to worry about raising funds. Financial resources were provided under the central plan and firms did not have strong budget constraints because the state, which was the owner of most assets, ensured them from the possibility of bankruptcy. Therefore, and also in the light of what we observed about the link between legal rules and financial markets development, it is very important for these firms to rely on a legal environment which helps them in raising financial resources.

Studying the link between corporate governance and corporate finance in transition economies is also important in order to assess the extent of the restructuring efforts occurred in the legal system from the begining of the transition process.

Reforms in transition economies, in fact, have to deal with different problems and challangings which could be passed, in part, with the development of an appropriate legal framework in protecting outsider investors. The quality of shareholder and creditor rights could be an important factor behind restructuring efforts, encouraging the change with respect to many problems still affecting firms and financial markets in transition economies.

In many countries, in fact, minority shareholders still have a small role in financing firms. One of the causes of this situation is related to the methods of privatization used in many transition economies. These methods were often designed and implemented by managers that under the central planning accumulated implicit rights of control. Consequently, the main result of privatization in many cases was the allocation of ownership of the firms to these managers and the

[13] Cass (2003).

establishment of an ownership structure characterized by the presence of a limited number of controlling shareholders who were, at the same time, managers of the firm.

But another important cause of the weak role of outsider ownership is the influence that states are still exercising on the decisions - making process of most companies. States, in fact, still own a golden share in many companies in exchange for regulatory favours, subsidies and tax arrears. The strong presence of states in the firms' ownership obviously does not encourage the latter in the development of appropriate mechanisms of corporate governance. It is in this vein legal protection of shareholders and creditors could be an effective subsitutive mechanism of weak corporate governance rules, consequently improving the role of outsiders investors and the development of the financial markets in transition economies.

Taking into account changes occurred between 1992 and 1998 in the legal protection of minority shareholders and creditors, Pistor et al. (2000) focus in 1998 their empirical analysis on the financial markets development in transition economies.

The present work extends the analyses of Pistor et al. (2000) with regard the relationship between legal rules and financial system development.

Differently from Pistor et al. (2000), we test this relationship with regard to a larger period. More precisely, we consider a period from 1996 to 2004 and we divide it into two sub - periods. The first one concerning years from 1996 to 2000 and the second one from 2001 to 2004. For the period 1996 - 2000 we want to test the robustness of the results of Pistor et al. (2000). Specifically, these results refer just to one year: 1998. Our purpose is to verify if they also occur for a larger period.

Finally for the period 2001 - 2004 we want to test if the results we find still occur for subsequent years or some changes occured in the development process of financial markets.

We also extend the analysis of Pistor et al. (2000) using additional and different controls. In particular we control for the level of *GDP per capita*, for the level of *trust* between people, and for the level of *corruption* existing in a given country.

Additional controls allow to test if the results of Pistor et al. (2000) also occur when a broader

set of variables is considered. In particular, our aim is to verify if *rule of law* really matters for the development of financial markets. Specifically, our purpose is to test if it is the most powerfull determinant of financial markets development, as Pistor et al. (2000) suggest, or, conversely, if there are other variables (as the ones we use as controls) that may promote it.

In addition, we test if the high power of explanation of the *rule of law* for the development of the financial system is real or it is an artefact of the high correlation of the *rule of law* with other potential relevant variables.

This is the main reason why we control for the level of the *GDP per capita*. The latter, in fact, is representative of some several aspects (as the *human capital* accumulation, the *life expectancy*, *structural change* of output, and the *quality of the institutions*) which may influence the development of the financial markets.

In the light of the positive relationship between *social capital* and financial markets development, as suggested by Guiso et al (2004), we control for the percentage of people who believe that other people can be trusted. One of the variables used in measuring social capital is the level of trust existing between agents. With regard to financial markets, *trust* is important in the way through which it encourages economic transaction. "Financing, in fact, is nothing but an exchange of a sum of money today for a promise to return more money in the future. Whether such an exchange can take place depends not only on the legal enforceability of contracts, but also on the extent to which the financier trusts the financee"[14].

In addition, we control for the level of *corruption* taking also into account its high correlation with the variable *rule of law*. As the latter, *corruption* is a proxy for the quality of encorcement of the legal rules protecting investor rights. In particular, "it deal more generally with the government' s stance toward business"[15].

Finally, we test the existence of *absolute* and *conditional convergence* in the levels of both *stock market capitalization/GDP* and *domestic credit provided by the banking sector/GDP ratio*, in

[14] Guiso et al (2004).
[15] LaPortaetal1998.

the period 1996 - 2004. In this specific case, *absolute convergence* occurs when the levels of *stock market capitalization* and *domestic credit* of transition economies converge among them in the long run, independently of their initial conditions. Differently, *conditional convergence* occurs when the level of *stock market capitalization* and *domestic credit* converge in the long run independently of their initial conditions. We consider as conditional variables the ones generally used in the literature on corporate finance: investor rights and their enforcement.

In the following sections we respectively illustrate the variables involved in our empirical analysis, the sources they come from and the reasons why we choosed each of them in order to examine financial markets development in transition economies.

Finally, we summarize and discuss the main results of our empirical analysis in a subsequent section.

4.2.2 Data

In order to analyse the effects of the legal protection (both laws on the book and their enforcement) of shareholders and creditors on financial markets development, we construct a dataset that includes measures of financial markets breadth and indexes assessing the quality of the legal protection of outsider investors.

This dataset concerns a sample of 22 countries and for each of them it contains observation for years from 1990 to 2004. Countries are the same we considered in chapter 3 for our descriptive analysis. More precisely, they are: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kyrgystan, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, and Ukraine. As we discussed above, we select these countries because our empirical analyses aims to reply those of Pistor et al. (2000) which involves the same sample of countries.

Differently from Pistor et al. (2000), in our analysis we use observations from 1996 to 2004. This because for most of our regressions, we include the variable *rule of law* whose values are

available only from 1996. For the reasons mentioned above, we divide the sample into two sub - samples. The first includes observation from 1996 to 2000 and the second observation from 2001 to 2004.

Given this allocation of the data, we use values from 1996 on for all the variables we exploit in our regressions. And this, in order to make comparable analyses with regard especially to the first period.

The fact that data for *rule of law* are available not before 1996, is representative of a general difficulty in collecting data for these countries. For transition economies, in fact, data are usually not complete for the earlier period of transition. Therefore, having a database covering a long period of time and which is also balanced is a bit tricky.

The data we use and the sources they come from are summarized in Tables from 4.1 to 4.6 . We use two measures of financial markets development. The ratio of *market capitalization of listed companies to GDP (MC/GDP)* for stock markets and the ratio of *domestic credit provided by banking sector to GDP (DC/GDP)* for credit markets. Specifically, we use the average of the observations from 1996 to 2000 for regressions of the first period, and the average of the observations from 2001 to 2004 for analyses of the second period.

Table 4.1: Description of the Variables

Variables	Description
ANTBLOCK9698	It is an index assessing the relative weight given by a legal system to the conflict between minority shareholders and blockholders. The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 8. This index is formed by adding 1 when: (1) shareholders have a preemptive right in case new shares are issued by the company; (2) cumulative voting for the election of the members of the supervisory board is allowed; (3) other rules to ensure proportional board representation are established; (4) shareholders may take judicial recourse against decisions taken by the shareholders' meeting; (5) at least the 50% of total voting shares must be represented at a shareholders' meeting in order to take binding decisions; (6) minority shareholders have a put option (such as the purchase of their shares by the company at the fair value) in case they have voted against major transaction, like mergers, reorganization, sale of major assets etc.; (7) mandatory disclosure is established in case of large blocks of shares (surpassing a given threshold) are bought; (8) mandatory take over bid are established when the purchase of shares surpasses a given percentage of the equity. *Source:* Pistor et al. (2000).
COLLAT9698	It is an index whose aim is to capture the existence of legal provisions on security interests. Average between values of 1996 and 1998 is used. The range for the index is from 0 to 3. It is formed by adding 1 when: (1) the establishing of a security interest in movable assets does not require the transfer of the assets; (2) a register for security interests in movables assets is established: (3) a security interest in land may be established. *Source:* Pistor et al. (2000).
CORRU96 and CORRU02	Measures perceptions of corruption, conventionally defined as the exercise of public power for private gain. Despite this straightforward focus, the particular aspect of corruption measured by the various sources differs somewhat, ranging from the frequency of additional payments to get things done,to the effects of corruption on the business environment, to measuring grand corruption in the political arena or in the tendency of elite forms to engage in state capture. It is assumed normally distributed. Therefore there is a 99% chance that a country' s rating would fall between -2.5 and 2.5. Data for 1996 and 2002 are used. *Source:* World Bank (2006). "World Development Indicators."
CREDIND02	It assesses the degree at which bankaruptcy and reorganization laws protect creditors' rights, in 2002. The range for the index is from 0 to 4. It is formed by adding 1 when: (1) restrictions, such as creditors' consent, are imposed to file for reorganization; (2) secured creditors are ranked first in the distribution of the proceeds resulting from the disposition of the assets of a bankrupt firm; (3) the debtor does not retain the administration of its property pending the resolution of the reorganization; (4) secured creditors are able to gain possess of their security once the reorganization petition has been approved. Based on La Porta et al. (1998). *Source:* Dataset of Shleifer A.(2007).

Table 4.2: Description of the Variables

Variables	Description
DIRLIABIND	It is an index assessing the protection of minority shareholders against directors misuse of corporate assets for personal gain, in 2005. It refers in particular to the aspect of the liability for self - dealing. The range for the index is from 0 to 10. It is formed by adding 0, 1, or 2 depending on the extent at which laws protect minority shareholders with respect to different aspects. It measures: (1) shareholders' ability to hold directors - blockholders liable for the damage the transactions they undertake cause to the company; (a score of 0 is assigned if directors - blockholders cannot be held liable or can be held liable only for fraud or bad faith; 1 if they can be held liable only if they influenced the approval of the transactions or were negligent; 2 if they can be held liable when transactions were unfair or prejudicial to the other shareholders); (2) shareholders' abilityl to hold the approving body (the CEO or board of directors) liable for damage transactions cause to the company (a score of 0 is assigned if the approving body cannot be held liable or can be held liable only for fraud or bad faith; 1 if it can be held liable for negligence; 2 if it can be held liable when transactions are unfair or prejudicial to the other shareholders); (3) whether a court can void transactions upon a successful claim by a shareholder plaintiff (a score of 0 is assigned if rescission is unavailable or is available only in case of fraud or bad faith; 1 if it is available when the transaction is oppressive or prejudicial to the other shareholders; 2 if it is available when transactions are unfair or entails a conflict of interest); (4) whether directors - blockholders pay damages for the harm caused to the company upon a successful claim by the shareholder plaintiff (a score of 0 is assigned if no; 1 if yes); (5) whether directors - blockholders repay profits made from the transaction upon a successful claim by the shareholder plaintiff (a score of 0 is assigned if no; 1 if yes); (6) whether fines and imprisonment can be applied against directors - blockholders (a score of 0 is assigned if no; 1 if yes); (7) shareholder plaintiffs ability to sue directly or derivatively for damage transactions cause to the company (a score of 0 is assigned if suits are unavailable or are available only for shareholders holding more than 10% of the company s share capital; 1 if direct or derivative suits are available for shareholders holding 10% or less of share capital). *Source:* Doing Business Methodology and Surveys 2007.

Table 4.3: Description of the Variables

Variables	Description
DISCIND	It is an index assessing the protection of minority shareholders against directors misuse of corporate assets for personal gain, in 2005. It refers in particular to the aspect of the transparency of transactions. The range for the index is from 0 to 10. It is formed by adding 0, 1, 2, or 3 depending on the extent at which laws protect minority shareholders with respect to different aspects. It has 5 components: (1) what corporate body can provide legally sufficient approval for the transaction (a score of 0 is assigned if it is the CEO or the managing director alone; 1 if the board of directors or shareholders must vote and blockholder - managing director is permitted to vote; 2 if the board of directors must vote and blockholder - managing director is not permitted to vote; 3 if shareholders must vote and blockholder - managing director is not permitted to vote); (2) whether immediate disclosure of the transaction to the public, the shareholders or both is required (a score of 0 is assigned if no disclosure is required; 1 if disclosure on the terms of the transaction but not managing director - blockholder s conflict of interest is required; 2 if disclosure on both the terms and managing director - blockholder s conflict of interest is required); (3) whether disclosure in the annual report is required (a score of 0 is assigned if no disclosure on the transaction is required; 1 if disclosure on the terms of the transaction but not managing director - blockholder s conflict of interest is required; 2 if disclosure on both the terms and managing director - blockholder s conflict of interest is required); (4) whether disclosure by managing director - blockholder to the board of directors is required (a score of 0 is assigned if no disclosure is required; 1 if a general disclosure of the existence of a conflict of interest is required without any specifics; 2 if full disclosure of all material facts relating to managing director - blockholder s interest in the transaction is required); (5) whether it is required that an external body, for example, an external auditor, review the transaction before it takes place (a score of 0 is assigned if no; 1 if yes). *Source:* Doing Business Methodology and Surveys 2007.
DC/GDP	Ratio of the domestic credit provided by banking sector to GDP. Average between values of 1996 and 2000 and between 2001 and 2004 is used. Domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. *Source:* World Bank (2006). "World Development Indicators."

Table 4.4: Description of the Variables

Variables	Description
EXIT9698	It is an index assessing the extent of legal rules in facilitating shareholders leaving the companies. The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 0 to 4. It is formed by adding 1 when: (1) minority shareholders have a put option (such as the purchase of their shares by the company at the fair value) in case they have voted against major transaction, like mergers, reorganization, sale of major assets etc.; (2) mandatory disclosure is established in case of large blocks of shares (surpassing a given threshold) are bought; (3) right to transfer shares is not restricted by law and may not be limited by charter; (4) formal requirements for the transfer of shares are limited to endorsement (for bearer shares) and registration (for registered shares). *Source:* Pistor et al. (2000).
GDPPC	Level of the real GDP per capita in 1996 and 2001. *Source:* Penn World Table 6.2.
LLSVCR9698	It involves four variables addressing the role of creditors in the bankruptcy procedure. The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 4. It is formed by adding 1 when each of the provision described also for CREDIND02 are verified. *Source:* La Porta et al. (1998).
LLSVSH9698	It measures the degree to which the legal system protect minority shareholders against the risk blockholders and managers expropriate them. The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 6. It is formed by adding 1 when: (1) shares are not blocked before shareholders' meeting; (2) proxy vote by mail is allowed; (3) cumulative voting for directors and mechanisms of proportional representation on the board are established; (4) legal mechanisms against oppression by director and blockholders are established; (5) shareholders have a preemptive right in case new shares are issued by the company; (6) the percentage of equity needed to call an extraordinary meeting is is at or below the countries' sample median of 10%. *Source:* La Porta et al. (1998). (See section 4.1 for details).
MACROSTAB	It measures the proportion of years since the beginning of transtion in which inflation was below 30% and deficit below 5% Data for deficit and inflation are from International Financial Statistics Database (2007).
MC/GDP	It is the value of the market capitalization of listed companies to GDP ratio. Average between 1996 and 2000 and 2001 and 2004 is used. Market capitalization is the share price times the number of shares outstanding. Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. *Source:* World Bank (2006). "World Development Indicators."

Table 4.5: Description of the Variables

Variables	Description
PRIVAT	Is a vector of dummy variables for all all countries where voucher privatization was the first method of privatization adopted. In particular: Armenia Azerbaijan, Czech Republic, Kyrgyzstan, Lithuania, Moldova, and Russia.
REM9698	It is an index addressing those sanctions secured and unsecured creditors may impose on management *ex post*. For example, creditors may hold management liable for violating bankruptcy rules. The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 3. It is formed by adding 1 when: (1) management is hold liable in case it violates provisions of insolvency laws; (2) transactions preceding the opening of bankruptcy procedures may be declared null and void; (3) creditors may pierce the corporate veil. *Source:* Pistor et al. (2000).
ROL96 and ROL01	Rule of law includes several indicators (the perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts) which measure the extent to which agents have confidence in and abide by the rules of society, in 2002 and 2004. It is assumed normally distributed. Therefore there is a 99% chance that a country' s rating would fall between -2.5 and 2.5. *Source:* World Bank (2006). "World Development Indicators."
SMIN9698	It is an index assessing those rules the primary purpose of which is to ensure the integrity of the capital markets. The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 6. It is formed by adding 1 when: (1) rules against self - dealing, including rules on disclosing conclict of interest and absaining from voting are established by the law; (2) shareholders register must be conducted by independent firm and not by the issuing compnay; (3) Insider trading is prohibited by law; (4) a state agency conducts capital markets' supervision; (5) supervisory bodies are independent; (6) mandatory take over bid are established when the purchase of shares surpasses a given percentage of the equity. *Source:* Pistor et al. (2000).

Table 4.6: Description of the Variables

Variables	Description
SUITIND	It is an index assessing the strength of minority shareholders' protections against directors misuse of corporate assets for personal gain, in 2005. It refers in particular to the aspect of the ability of shareholders to sue officers and directors for misconduct. The range for the index is from 0 to 10. It is formed by adding 0, 1, or 2 depending on different aspects. It measures: (1) the range of documents available to the shareholder plaintiff from the defendant and witnesses during trial (a score of 1 is assigned for each of the following types of documents available: information that the defendant has indicated he intends to rely on for his defense; information that directly proves specific facts in the plaintiff s claim; any information relevant to the subject matter of the claim; and any information that may lead to the discovery of relevant information); (2) whether the plaintiff can directly examine the defendant and witnesses during trial (a score of 0 is assigned if no; 1 if yes, with prior approval of the questions by the judge; 2 if yes, without prior approval); (3) whether the plaintiff can obtain any documents from the defendant without identifying them specifically (a score of 0 is assigned if no; 1 if yes); (4) whether shareholders owning 10% or less of the company s share capital can request that a government inspector investigate transactions (a score of 0 is assigned if no; 1 if yes); whether shareholders owning 10% or less of the company s share capital have the right to inspect the transaction documents before filing suit (a score of 0 is assigned if no; 1 if yes);(6) whether the standard of proof for civil suits is lower than that for a criminal case (a score of 0 is assigned if no; 1 if yes). *Source:* Doing Business Methodology and Surveys 2007.
TRUST	% of people interviewed who believe that people can be trusted. Average between values of 1996 and 1996 is used. *Source:* World Value Survey (2005).
VOICE9698	It is an index assessing the extent with which the legal system protect some minority shareholders' control rights, The average between the values of 1996 and 1998 is used. The range for the index is from 0 to 13. It includes all the rights involved by LLSVSH 98 as well other control rights: (1) the right of minority shareholders to call an audit commission in charge of reviewing books; (2) a minimum quorum requirement for sharehoders' meeting to take binding decisions, (3) super - majority requirements for adopting deccisions that affect the existece of the corporation in its current form; $(4)$the possibility to fire directors and managers at any time and without cause; (5) and the absence of a mandatory provisions on employee or state representatves on the board which might weaken sharehoders' control. It is formed by adding 1 when the previous provisions occur. *Source:* Pistor et al. (2000)

Stock market capitalization may be influenced by the mass privatization programs that took place in the first years of transition in many countries of the Central - Eastern and South - Eastern Europe [16]. For this reason we include a dummy variable in our regressions for all countries which adopted voucher privatization as first method of privatization. More precisely, these countries are: Albania, Armenia, Czech Republic, Georgia, Kyrgystan, Lithuania, Moldova, Russia, and Ukraine. This variable is denoted as *PRIVAT*.

For credit markets we have to take into account that at the beginning of 1990s most transition economies were characterized by high levels of inflation and budget deficit. For this reason we include an additional control in the regression concerning the link between legal rules and credit markets development. It is represented by the variable *MACROSTAB* which measures the proportion of years in which a country experienced stable macroeconomic condition since the beginning of the transition process. In particular, stable macroeconomic conditions are defined as follow: inflation rate below 30% and deficit below 5% of GDP. Macroeconomic instability, and in particular high levels of inflation increase the cost of money and, by this way, negatively influence the level of debt provided by the banking sector.

Our measures of investor protection are based, for the period 1996 - 2001, on the indexes developed by Pistor et al. (2000). In particular, Pistor et al. (2000) provide data about creditor and shareholder rights for years 1992, 1994, 1996, and 1998. In our analysis, we use the average data of 1996 and 1998 in order to take into account changes occured in these two years in the legal protection of shareholder rights. Indexes we use in order to measure the quality of the legal protection of shareholder are the following: *ANTBLOCK9698, EXIT9698, LLSVSH9698, SMIN9698,*and *VOICE9698*.

In order to assess the quality of creditor rights, we include in our regressions the following variables: *COLLAT9698, LLSVCR9698,* and *REM9698*. A detailed description of all these variables is provided in the previous tables.

Assessing the quality of the legal protection of outsider investors for the period 2001 - 2004

[16] For more details see chapter 3.1.

has been more complicated than for the first period.

Indexes used for years 1996 - 2000 were not updated for subsequent years. Therefore we were forced to use different variables from the ones described above.

The index we use in order to assess the quality of creditor rigths is equivalent, in term of composition and methodology used for its setting up, to the variable *LLSVCR9698*. We call this index *CREDIND02* and for the period we consider, it is available only for year 2002. We collect it from the database used in Shleifer et al. (2007). This index does not cover a detailed and wide range of rights as the ones constructed by Pistor et al. (2000) but it is the only index available for the period we want to analyse. The only other variable we find, in order to estimate the quality of creditor protection, are available at the Doing Business database. It is a database updated each year by the World Bank and which provides "objective measures of business regulations and their enforcement"[17] in different countries. These indexes are more detailed and exhaustive than the one we use, but for transition economies they are not available before 2005.

Assessing shareholders rights in the period 2001 - 2004, is more complex than for creditors. First of all, the only data we find are available, once again, at the Doing Business database. As for indexes assessing creditor rights, data for shareholders are not available before 2005. Due to the lack of other sources providing data about the quality of the protection of shareholder rights we were forced to use data of the Doing Business database. Even if they refer to 2005 (while our regressions refer to the period 2001 - 2004), we believe that this does not influence the results of our analyses. In fact, we can reasonably assume that the quality of the law in protecting shareholders in 2005 is the same for 2001, 2002, 2003 and 2004, even if the Doing Business database does not provide data for these years. The reason of such an assumption is that no reforms occur, in these years, in the law concerning corporate governance and securities markets regulations which could change the quality of the shareholder rights. The dynamics of the reform process, in all transition economies, are captured by the following two indexes constructed by the European Bank for Reconstruction and Development: the *EBRD index of*

[17] Doing Business Methodology and Surveys, (2007).

enterprise reform (which captures reforms occurred with regard to corporate governance) and the *EBRD index of reform of non - bank financial institutions* (which captures reforms occurred with regard to the securities markets regulation). If we check for each country, we observe that these two indexes take a same values from 2001 to 2005. This prove that no reforms are occurred in these years and, consequently, that no changes are experienced by the quality of the legal system in protecting shareholder rights. A description of the indexes and the evidence of their values is provided in Appendix A.

The variables collected from the Doing Business database in order to represent shareholder rights are descripted in details in the previous tables. In particuar, we collect three different indexes and we refer to them, respectively, as: *DIRLIABIND*, *DISCIND*, and *SUITIND*.

As Pistor et al. (2000), we consider in our regressions the variable *rule of law* which is a measure of the quality of the enforcement of the legal rules. We take values of 1996 and 2001 and we represent them with the variables *ROL96* and *ROL01*. This variable is used because it takes into account several aspects concerning the law and order environment of a certain country; as the quality of the definition of the property rights and the enforceability of contracts. These two aspects are important because they may influence the decision of a given agent concerning the investment in the financial markets of a country. In fact, the possibility his/her investment will be remunerated also depends from the definition of the property rights but, overall, from the enforceability of the latter. Therefore, it is in this vein that the *rule of law* is considered as a possible determinant of financial markets development.

At last we add several controls to our regressions that are not used in Pistor et al. (2000).

As discussed above, one of the variables for which we control is the level of *corruption* existing in a given country. We made this control for both period, 1996 - 2000 and 2001 - 2004. For the first period we control for the level of *corruption* in 1996. For the second period, because of the lack of data in 2001, we were forced to control for the level of *corruption* in 2002. We represent the level of corruption in these two years, respectively with the variables *CORRU96* and *CORRU02*. A detailed description of the variables is provided in the previous

tables.

In addition, we control for the level of the *GDP per capita (GDPPC)* in 1996 and 2001. We include these controls through the variables *GDPPC96* and *GDPPC01*.

In the light of the findings of Guiso et al (2004) we also control for the percentage of people who believe other people can be trusted. Due to the lack of data for the second period, we make this control only in the first period using the average data of trust between 1996 and 1997. The variable we include is called *TRUST*.

At last, in order to tests the hypoteses of *absolute* and *conditional convergence*, we control our regressions for the initial levels of the variables stock market capitalization/GDP and domestic credit provided by the banking sector/GDP. These variables are included in our regressions with the name *MCGDP96* and *DCGDP96*.

4.2.3 Results

Table 4.7 provides the main results with regard to the link between stock markets development and legal protection of shareholder rights, in the period 1996 - 2000. Columns from I to V show the results of the repetition of the regressions of Pistor et al. (2000). Their results, however, are not confirmed for a larger period than the one they consider. In fact, we can see that not only *rule of law* is a determinant of the securities markets development. Specifically, we find that also rules on the book, protecting shareholders rights, matters for the growth of the stock markets. These rules concern, in particular, the protection of shareholders against the risk of expropriation from insiders (*LLSVSH9698* and *ANTBLOCK9698*) and the integrity of the stock markets (*SMIN9698*).

Subsequently, we repeat these regressions adding the logarithm of the level of *GDP per capita* in 1996. Our purpose is to test if *rule of law* really matters for the development of stock markets, as we and Pistor et al. (2000) find. In particular, the logarithm of the level of *GDP per capita* is a proxy of many others aspects that may influence, as well the *rule of law*, the development

of stock markets. Therefore, we want to analyse if *rule of law* is so a powerfull determinant of financial development or, conversely, there are other variables that may promote it. In addition, we want to exploit the high correlation existing between the *rule of law* and our control (the coefficent of correlation is equals to 0.65) in order to test if *rule of law* is a determinant of stock markets development in itself, or if it is because proxy of other variables like the ones involved by the *GDP per capita*.

Our conjectures find confirm in Table 4.7 . In fact, adding as control the logarithm of the *GDP per capita*, *rule of law* loses significance as well as the variable *LLSVSH9698*.

In Table 4.8 we repeat the same analyses for the years 2001 - 2004. As well as for the previous period, *rule of law* matters in promoting stock markets development only if no further controls are used. In fact, once we add the logarithm of the *GDP per capita* as control, *rule of law* loses significance.

Differently from the previous period, law on the book does not encourage securities markets growth. In this case we consider rules protecting shareholders against insiders misuse of corporate assets because of phenomenons of *self - dealing (DIRLIABIND)* or because of the lack of transaprency in the transaction they undertake *(DISCIND)*. In addition, we consider rules concerning the possibility for shareholders to sue insiders for misconduct *(SUITIND)*.

Table 4.8 shows that none of these variables take a statistically significant value, in all the six regressions.

Table 4.9 illustrates the main results concerning the link between credit markets development and legal protection of creditors rights for the years 1996 - 2001. As for stock markets, we have two groups of regressions. They concerns, respectively, the repetition of the analyses of Pistor et al. (2000), (columns from I to V), and the control for the logarithm of the level of *GDP per capita (LOGGDPPC96)* in 1996, (columns from I to V).

Table 4.7: Shareholder rights and stock market development. Dep. var. : stock market capitalization/GDP, ave. (1996 - 2000). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X
LLSVSH9698	4.28^{*} (1.92)					2.84 (2.08)				
VOICE9698		1.02 (0.89)					0.74 (0.81)			
SMIN9698			2.59^{*} (0.94)					2.17^{*} (0.88)		
ANTBLOCK9698				$2.25^{\cdot}$ (1.28)					1.48 (1.26)	
EXIT9698					2.03 (1.70)					1.19 (1.60)
ROL96	10.22^{**} (3.18)	11.42^{**} (3.72)	8.98^{**} (3.01)	9.19^{*} (3.73)	9.08^{*} (3.58)	6.13 (4.11)	5.68 (4.29)	4.68 (3.45)	4.74 (3.98)	4.23 (4.05)
LOG(GDPPC96)						6.78 (4.56)	$9.05^{\cdot}$ (4.23)	$7.55^{\cdot}$ (3.69)	$7.98^{\cdot}$ (4.35)	$8.84^{\cdot}$ (4.37)
PRIVAT	2.48 (3.41)	1.90 (3.84)	$6.20^{\cdot}$ (3.44)	3.59 (3.29)	1.87 (3.83)	4.23 (3.48)	4.35 (3.63)	7.48^{*} (3.18)	5.05 (3.48)	4.39 (3.70)
Num. oss.	19	19	19	19	19	19	19	19	19	19
Adj. R^2	0.41	0.27	0.47	0.34	0.28	0.45	0.41	0.57	0.43	0.40
F − stat.	5.09	3.24	6.41	4.13	3.30	4.68	4.15	6.87	4.43	4.01

Table 4.8: Shareholder rights and stock market development. Dep. var. : stock market capitalization/GDP, ave. (2001 - 2004). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI
DIRLIABIND	-0.50			-1.07		
	(1.47)			(1.43)		
DISCIND		0.95			1.37	
		(1.16)			(1.10)	
SUITIND			-0.71			-0.86
			(1.31)			(1.26)
ROL01	9.69·	10.69·	9.36·	3.25	3.90	2.77
	(5.12)	(5.06)	(4.74)	(6.23)	(6.06)	(6.19)
PRIVAT	4.59	5.66	4.96	5.85	7.43	6.21
	(6.01)	(6.05)	(6.02)	(5.75)	(5.73)	(7.81
LOG(GDPPC01)				12.40	12.93·	11.46
				(7.51)	(7.22)	(7.34)
Num. oss.	19	19	19	19	19	19
Adj. R^2	0.04	0.08	0.05	0.14	0.20	0.14
F − stat.	1.27	1.50	1.34	1.74	2.09	1.71

Differently from stock markets, law on the book does not matter for the development of the credit markets. All the variables describing different creditors rights, are not statistically significant in all the regessions. In particular we include variables which capture the possibility for creditors to impose sanctions to managers *ex post (REM9698)*, legal provisions on security interests *(COLLAT9698)*, and the role of creditors in the procedure of bankruptcy *(LLSVCR9698)*. *Rule of law*, again, matters for the development of financial markets only if we consider it without additional controls. In fact, if we add the variable representing conditions of macrostability (*MACROSTAB)* and the logarithm of *GDP per capita*, *rule of law* loses significance.

Table 4.9: Creditor rights and credit market development. Dep. var. : domestic credit provided by banking sector/GDP, ave. (1996 - 2000).
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X
LLSVCR9698	-1.20 (1.96)	-0.95 (2.13)	-0.03 (1.89)			-2.03 (1.84)	-2.06 (1.91)	-1.40 (1.77)		
REM9698				2.32 (4.20)					0.68 (3.85)	
COLLAT9698					-4.57 (3.01)					-3.28 (3.02)
ROL96	11.04 (6.87)	19.93** (5.98)		18.22** (5.15)	9.34 (6.06)	7.48 (6.51)	12.29. (5.97)		10.19. (5.81)	5.92 (6.25)
MACROSTAB	32.18* (14.99)		46.71** (12.45)		32.02* (14.23)	22.68 (14.45)		30.50* (12.85)		24.56 (14.55)
LOG(GDPPC96)						11.94* (5.66)	14.70* (5.59)	13.62* (5.51)	13.19* (5.72)	8.88 (5.76)
Num. oss.	22	22	22	22	22	22	22	22	22	22
Adj. R^2	0.45	0.35	0.41	0.35	0.51	0.54	0.50	0.53	0.47	0.54
F − stat.	6.81	6.65	8.24	6.74	8.16	7.20	8.12	9.00	7.29	7.18

In particular, we observe that our measure of macroeconomic stability matters for the developmentof credit markets, confirming that countries with macroeconomic instability tend to have lower level of the ratio *domestic credit/GDP*.

The results we find for the first period, are confirmed for years between 2001 and 2004. Table 4.10 shows, in fact, that the legal protection of creditor rights does not matter for the growth of the credit markets. Due to the lack of data, we use for this period only one variable as measure of the quality of the legal protection of creditors rights. It is the variable *CREDIND02* and it assesses the protection law grants to creditor in the bankruptcy procedure. As we discussed above, it is the equivalent of the variable *LLSVCR96698* we use for the first period.
In addition, *rule of law* matters only if we consider it without additional controls. Once again, if we add the variables (*MACROSTAB)* and *LOG(GDPPC01)*, *rule of law* loses significance.
At last, for the variable assessing the macrostability conditions the same results of the previous regressions occur.

Table 4.10: Creditor rights and credit market development. Dep. var. : domestic credit provided by banking sector/GDP, ave. (2001 -2004). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI
CREDIND02	1.96 (2.92)	-0.11 (2.86)	-2.27 (2.95)	1.96 (2.72)	0.12 (2.71)	-0.96 (2.65)
ROL01	15.92^{***} (2.84)	9.14^{*} (4.21)		11.33 (3.56)	5.96 (4.34)	
MACROSTAB		$25.30^{\cdot}$ (12.30)	46.23^{***} (8.40)		$22.33^{\cdot}$ (11.71)	32.72^{**} (9.15)
LOG(GDPPC01)				$8.43^{\cdot}$ (4.38)	$7.31^{\cdot}$ (4.12)	9.63^{*} (3.85)
Num. oss.	21	21	21	21	21	21
Adj. R^2	0.60	0.66	0.59	0.65	0.70	0.68
F − stat.	15.72	13.77	15.46	13.29	12.42	15.16

Table 4.11 and 4.12 show the main results with reference to the role of the *trust* in promoting both stock and credit markets development. Guiso et al (2004) evidence a positive relationship between the level of *trust* existing between people and financial markets development. We test if this relationship occurs also for transition economies. Because of the lack of data, we control for the level of *trust* only for the first period. Table 4.11 and 4.12 show two main results.

Table 4.11: Shareholder rights and stock market development. The role of the trust. Dep. var. : stock market capitalization/GDP, ave. (1996 - 2000). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X
LLSVSH9698	4.28^{*} (1.92)					3.34 (3.36)				
VOICE9698		1.02 (0.89)					0.65 (1.51)			
SMIN9698			2.59^{*} (0.94)					$3.79^{\cdot}$ (1.72)		
ANTBLOCK9698				$2.25^{\cdot}$ (1.28)					2.21 (2.07)	
EXIT9698					2.03 (1.70)					2.23 (3.53)
ROL96	10.22^{**} (3.18)	11.42^{**} (3.72)	8.98^{**} (3.01)	9.19^{*} (3.73)	9.08^{*} (3.58)	9.84 (6.56)	9.54 (7.73)	9.81 (5.19	8.13 (6.18)	8.04 (6.48)
TRUST						0.10 (0.97)	0.22 (1.13)	-0.78 (0.93)	0.12 (0.95)	0.20 (1.03)
PRIVAT	2.48 (3.41)	1.90 (3.84)	$6.20^{\cdot}$ (3.44)	3.59 (3.29)	1.87 (3.83)	4.16 (7.08)	4.41 (7.55)	11.54 (6.75)	4.30 (7.02)	3.52 (7.37)
Num. oss.	19	19	19	19	19	12	12	12	12	12
Adj. R^2	0.41	0.27	0.47	0.34	0.28	0.01	0.76	0.33	0.03	-0.064
F − stat.	5.09	3.24	6.41	4.13	3.30	1.04	-0.10	2.40	1.09	0.83

Table 4.12: Creditor rights and credit market development. The role of the trust. Dep. var. : domestic credit provided by banking sector/GDP, ave. (1996 - 2000). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X
LLSVCR9698	-1.20	-0.95	-0.03			-3.26	-0.88	-1.50		
	(1.96)	(2.13)	(1.89)			(3.18)	(3.51)	(3.08)		
REM9698				2.32					7.68	
				(4.20)					(6.98)	
COLLAT9698					-4.57					-5.18
					(3.01)					(4.01)
ROL96	11.04	19.93**		18.22**	9.34	13.38	21.68		21.87	11.65
	(6.87)	(5.98)		(5.15)	(6.06)	(9.27)	(9.92)		(7.75)	(8.49)
MACROSTAB	32.18*		46.71**		32.02*	45.52		57.23*		38.94·
	(14.99)		(12.45)		(14.23)	(20.29)		(19.50)		(11.68)
TRUST						0.78	0.36	0.57	0.56	0.72
						(0.65)	(0.72)	(0.66)	(0.71)	(0.61)
Num. oss.	22	22	22	22	22	15	15	15	15	15
Adj. R^2	0.45	0.35	0.41	0.35	0.51	0.42	0.21	0.36	0.28	0.45
$F-$ stat.	6.81	6.65	8.24	6.74	8.16	3.51	2.20	3.63	2.81	3.82

First, for transition economies the relationship highlighted by Guiso et al (2004) does not occur. For these countries, *trust* is not a determinant of the financial markets development. Second, we find confirm about the role of the *rule of law* in promoting financial growth. Once again, our analyses show that *rule of law* loses significance when a further control is included. Therefore, there is evidence that *rule of law* is not a powerfull determinant of financial markets development as long as it seems. And also that there are other variables, in addition to it, which matter for financial markets development. It could be argued that *rule of law* loses significance because of the high correlation existing with the control variable, as it is for the *LOG(GDPPC96)* and the *MACROSTAB* variables. However, *rule of law* and *trust* are not high correlated (the correlation coefficent is equals to 0.20) and this strenghted our results.

Table from 4.12 to 4.16 illustrate our finding with reference to the effects of *corruption* on financial markets development. In particular, Table 4.12 and 4.13 refer to stock markets respectively for period 1996 - 2000 and 2001 - 2004; Table 4.14 and 4.15 refer to credit markets for the same periods.

Table 4.13: Shareholder rights and stock market development. The role of the corruption. Dep. var. : stock market capitalization/GDP, (1996 - 2001). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X
LLSVSH9698	4.28^{*} (1.92)					3.81 (1.95)				
VOICE9698		1.02 (0.89)					1.02 (0.75)			
SMIN9698			2.59^{*} (0.94)					$2.39^{\cdot}$ (0.93)		
ANTBLOCK9698				$2.25^{\cdot}$ (1.28)					2.16 (1.23)	
EXIT9698					2.03 (1.70)					1.37 (1.71)
ROL96	10.22^{**} (3.18)	11.42^{**} (3.72)	8.98^{**} (3.01)	9.19^{*} (3.73)	9.08^{*} (3.58)	5.05 (5.60)	4.25 (6.00	3.72 (5.12)	2.50 (5.61)	3.63 (6.15)
CORRU96						4.35 (3.84)	6.06 (4.07)	4.50 (3.96)	5.67 (3.88)	4.85 (4.45)
PRIVAT	2.48 (3.41)	1.90 (3.84)	$6.20^{\cdot}$ (3.44)	3.59 (3.29)	1.87 (3.83)	1.38 (3.53)	0.32 (3.84)	4.77 (3.56)	1.71 (3.67)	0.90 (3.91)
Num. oss.	19	19	19	19	19	19	19	19	19	19
Adj. R^2	0.45	0.35	0.41	0.35	0.51	0.42	0.33	0.49	0.38	0.29
$F-$ stat.	5.09	3.24	6.41	4.13	3.30	4.19	3.20	5.39	3.86	2.80

Table 4.14: Shareholder rights and stock market development. The role of the corruption. Dep. var. : stock market capitalization/GDP, (2001 - 2004). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI
DIRLIABIND	-0.45 (1.45)			-0.50 (1.47)		
DISCIND		1.00 (1.14)			0.95 (1.16)	
SUITIND			-1.14 (1.36)			-0.71 (1.31)
ROL01	$9.69^{\cdot}$ (5.12)	$10.69^{\cdot}$ (5.06)	$9.36^{\cdot}$ (4.74)	6.49 (5.85	7.53 (5.67)	5.46 (5.30)
PRIVAT	4.59 (6.01)	5.66 (6.05)	4.96 (6.02)	3.95 (6.00)	5.04 (5.99)	4.42 (5.82)
CORRU02				-0.32 (0.29)	-0.33 (0.28)	-0.43 (0.50)
Num. oss.	19	19	19	19	19	19
Adj. R^2	0.04	0.08	0.05	0.06	0.099	0.12
F − stat.	1.27	1.50	1.34	1.27	1.45	1.61

Table 4.15: Creditor rights and credit market development. The role of the corruption. Dep. var. : private credit provided by banking sector/GDP, (1996 - 2001). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X
LLSVCR9698	-1.20 (1.96)	-0.95 (2.13)	-0.03 (1.89)			-1.63 (2.03)	-1.42 (2.21)	-1.46 (1.98)		
REM9698				2.32 (4.20)					1.69 (4.36)	
COLLAT9698					-4.57 (3.01)					-4.25 (3.18)
ROL96	11.04 (6.87)	19.93** (5.98)		18.22** (5.15)	9.34 (6.06)	5.75 (15.01)	13.97 (8.80)		13.40 (8.87)	6.80 (8.81)
MACROSTAB	32.18* (14.99)		19.93** (12.45)		32.02* (14.23)	31.63· (9.04)		35.79* (13.36)		31.62* (14.60)
CORR96						5.76 (6.35)	6.31 (6.93)	8.37 (4.75)	4.68 (6.99)	6.19 (2.52)
Num. oss.	22	22	22	22	22	22	22	22	22	22
Adj. R^2	0.45	0.35	0.41	0.35	0.51	0.45	0.34	0.47	0.33	0.48
$F-$ stat.	6.81	6.65	8.24	6.74	8.16	5.26	4.69	7.11	4.52	5.88

Specifically, we find that *corruption* has no effects on financial markets development in transition economies. These results are highlighted for both stock and credit markets and both for the first and the second period. However, we have to observe that a high correlation exists between *corruption* and *rule of law*. In the two periods the correlation coefficent takes the value, respectively, 0.76 and 0.97. In fact, these two variables are both proxy of the quality of the law and order tradition in a given country. Even if, as La Porta et al. (1998) suggest, *rule of law* pertains more properly to the assessment of the quality of the law enforcement and *corruption* deals more with the stance of the government toward the business. High correlation between these two variables, on one side, invalidate our results with regard to the role of the *corruption*, but on the other side it confirms our finding with respect to the role of the *rule of law*. Specifically, it highlights once again that *rule of law* matters for the development of financial markets development also because is a proxy of other factors.

Table 4.16: Creditor rights and credit market development. The role of the corruption. Dep. var. : private credit provided by banking sector/GDP, (2001 - 2004). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI
CREDIND02	1.96 (2.92)	-0.11 (2.86)	-2.27 (2.95)	1.69 (2.96)	-2.53 (2.88)	-0.37 (2.71)
ROL01	15.92^{**} (2.84)	9.14^{*} (4.21)		6.55 (11.13)	-2.55 (11.62)	
MACROSTAB		$25.30^{\cdot}$ (12.30)	46.23^{***} (8.40)		26.14^{*} (12.28)	25.49^{*} (11.12)
CORRU02				9.89 (12.21)	11.99 (11.13)	9.72 (3.90)
Num. oss.	21	21	21	21	21	21
Adj. R^2	0.60	0.66	0.59	0.59	0.66	0.68
F − stat.	15.72	13.77	15.46	10.49	10.72	10.68

At last, we examine if there is convergence in the levels of both *stock market capitalization/GDP* ratio and *domestic credit/GDP* ratio. We take into account period 1996 - 2004 and we test the hypotheses of absolute and conditional convergence.

Table 4.17 and 4.18 show the main results with regard, respectively, to stock markets and credit markets. The inital value of both *stock market capitalization/GDP* and *domestic credit/GDP (MCGDP96, DCGDP96)* always show a negative coefficent but it has no statistical significance. This means that transition economies do not converge neither in absolute nor in conditional terms.

Table 4.17: Shareholder rights and stock market development. Dep. var. : average growth rate of stock market capitalization/GDP, (1996 - 2004).
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
LLSVSH9698		5.25					1.46				
		(6.29)					(2.15)				
VOICE9698			2.63					0.52			
			(2.25)					(0.76)			
SMIN9698				5.47					1.01		
				(3.26)					(1.02)		
ANTBLOCK9698					4.82					1.37	
					(4.40)					(1.39)	
EXIT9698						1.56					−0.12
						(5.03)					(1.54)
ROL96							1.05	0.79	0.02	0.70	−0.09
							(3.87)	(3.72)	(3.40)	(3.47)	(3.56)
MCGDPPC96	−0.31	−0.92	−0.71	−1.34·	−0.92	−0.98	−0.32	−0.27	−0.38	−0.31	−0.31
	(0.19)	(0.66)	(0.67)	(0.64)	(0.64)	(0.66)	(0.21)	(0.22)	(0.22)	(0.21)	(0.22)
Num. oss.	13	13	13	13	13	13	13	13	13	13	13
Adj. R^2	0.13	0.07	0.12	0.22	0.11	0.01	-0.02	-0.02	0.02	0.003	-0.06
F − stat.	2.73	1.44	1.84	2.70	1.73	1.07	0.99	0.96	1.11	1.15	0.74

Table 4.18: Creditor rights and credit market development. Dep. var. : average growth rate of domestic credit provided by banking sector/GDP, (1996 - 2004). Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

	I	II	III	IV	V	VI	VII	VIII	IX
LLSVCR9698		0.13^{*} (0.05)			0.19^{**} (0.059)	0.19^{**} (0.056)	0.15^{*} (0.56)		
REM9698			-0.052 (0.13)					-0.05 (0.14)	
COLLAT9698				0.02 (0.11)					0.012 (0.12)
ROL96					$-0.38^{\cdot}$ (0.22)	$-0.39^{\cdot}$ (0.19)		0.05 (0.20)	-0.09 (0.25)
MACROSTAB					-0.016 (0.44)		-0.37 (0.42)		0.14 (0.56)
DCGDP96	-0.0097 (0.0045)	-0.011^{*} (0.004)	-0.092 (0.004)	-0.009 (0.005)	-0.006 (2.005)	-0.001 (0.005)	$-0.001^{\cdot}$ (0.005)	-0.008 (0.006)	-0.009 (0.06)
Num. oss.	22	13	13	13	13	13	13	13	13
Adj. R^2	0.15	0.32	0.10	0.10	0.38	0.42	0.31	0.06	0.006
$F-$ stat.	4.65	5.88	2.30	2.22	4.72	4.23	6.03	4.15	1.48

In particular, the latter are represented by the variables that the literature concerning corporate finance highlights as the main determinant of financial markets development: rules protecting investor rights and their enforcement.

These results confirm the ones we find in our descriptive analyses discussed in chapter 3. In particular, the presence and the permanence of different paths of development with regard to both stock and credit markets in the sample of transition economies.

Chapter 5

Conclusion

The most important result of our analysis is that legal rules protecting shareholder and creditor rights, have no a relevant role in promoting the development of financial markets in transition economies. In particular, standards adopted from western countries have not improved corporate governance rules to the extent required to favor the development of the external finance. In particular we find that law on the book matters only for the development of stock markets and just for the first period we consider (1996 - 2000).

In addition, our regressions show that the legal effectiveness, as measured by the *rule of law*, has a higher power in explaining the level of both stock and credit markets development than the law on the book.

However, we believe that a word of caution is necessary to this end. Including in our regressions several controls, we find that *rule of law* loses significance in explaining financial markets development. This result induces us to think that the role of the *rule of law* in determining financial development is overestimated in the analysis of Pistor et al. (2000). In particular, this overestimation could be due to the low number of the available observations. In particular, *rule of law* loses significance when further variables are added (we refer to the the level of the *GDP per capita*, the level of *trust* between people, the level of *corruption* and the variable representing *macrostability* conditions), lead us to suggest the following interpretation. The *rule of law*

has a high explanatory power because proxy of other aspects.

An other important result of our analysis is that, with regard to transition economies, the findings of Guiso et al (2004) are not confirmed. In particular, controlling for the level of *trust* existing between people we do not find any significant effects on financial markets development. The level of *corruption* also seems to not produce any effects on the development of financial markets. However, it is important to keep in mind that the high correlation this variable has with the *rule of law* could invalidate this result.

Finally, we test the existence of absolute and conditional convergence in the level of both stock and credit markets development across transition economies. Our regressions show that there is no absolute convergence in the level of both stock and credit markets development across countries. The same result occurs with regard the existence of conditional convergence. The only exception to this latter dynamic is verified for credit markets. In particular we find that countries having similar legal protection of creditors in the bankruptcy procedure *(LLSVCR8689)* converge in the level of credit markets development.

Our findings show essentially that both law on the book and its enforcement have not a relevant explanatory power with regard to financial markets development in transition economies. Given these results, we believe that further efforts must be done in order to adopt rules able to promote financial growth. In particular, these efforts should be more oriented to the specific environment of transition economies. As Pistor et al. (2000) suggest the unconditional reference to the western standard could invalidated the results of reforms.

In addition the analysis suggest to explore the possibility of other possible determinants of financial markets development, beyond the *rule of law*. Specifically, in order to define the real aspects on which lever to encourage external finance development also in the light of the important links between economic growth and financial markets development.

Appendix A

Appendix

Table A.1: Table of correlations

	MC.96	L.SH	VO.	SM.	EX.	AN.BL.	ROL96	PC.96	L.CR	COL.	REM.	M.S	MC.01	DIR.	DISC.	SUIT.	ROL01
MC96	-	−0.16	−0.38	0.40	0.11	−0.02	0.26	0.44	0.23	−0.06	−0.35	0.54	0.47	0.13	−0.63	0.12	0.26
L.SH	−0.16	-	0.88	−0.12	0.54	0.72	−0.59	−0.25	−0.00	0.24	0.06	−0.60	0.27	−0.70	0.66	0.32	−0.76
VO.	−0.38	0.88	-	−0.06	0.45	0.69	−0.50	−0.28	0.02	0.49	0.03	−0.53	0.16	−0.62	0.73	0.21	−0.56
SM.	0.40	−0.12	−0.06	-	0.23	0.25	0.03	0.61	−0.36	0.38	0.36	0.38	0.36	−0.12	−0.24	−0.23	0.08
EX.	0.11	0.54	0.45	0.23	-	0.71	−0.13	0.15	−0.17	0.01	0.32	0.02	0.52	−0.03	0.15	0.30	−0.26
AN.BL.	−0.02	0.72	0.69	0.25	0.71	-	−0.30	0.01	−0.28	0.29	0.18	−0.39	0.36	−0.35	0.57	0.14	−0.47
ROL96	0.26	−0.59	−0.50	0.03	−0.13	−0.30	-	0.39	0.59	0.13	−0.49	0.65	−0.10	0.45	−0.51	0.49	0.90
PC.96	0.44	−0.25	−0.28	0.61	0.15	0.01	0.39	-	−0.03	0.23	0.15	0.39	−0.22	−0.12	−0.14	0.24	0.26
L.CR	0.23	−0.00	0.02	−0.36	−0.17	−0.28	0.59	−0.03	-	0.24	−0.85	0.36	0.02	−0.04	−0.30	0.75	0.50
COL.	−0.06	0.24	0.49	0.38	0.01	0.29	0.13	0.23	0.24	-	−0.14	−0.13	0.11	−0.54	0.24	0.23	0.07
REM.	−0.35	0.06	0.03	0.36	0.32	0.18	−0.49	0.15	−0.85	−0.14	-	−0.32	−0.01	−0.09	0.25	−0.44	−0.50
M.S.	0.54	−0.60	−0.53	0.38	0.02	−0.39	0.65	0.39	0.36	−0.13	−0.32	-	0.21	0.59	−0.81	0.12	0.79
MC.01	0.47	0.27	0.16	0.36	0.52	0.36	−0.10	−0.22	0.02	0.11	−0.01	0.21	-	0.08	−0.42	0.01	−0.06
DIR	. 0.13	−0.70	−0.62	−0.12	−0.03	−0.35	0.45	−0.12	−0.04	−0.54	−0.09	0.59	0.08	-	−0.59	−0.30	0.65
DIS.	−0.63	0.66	0.73	−0.24	0.15	0.57	−0.51	−0.14	−0.30	0.24	0.25	−0.81	−0.42	−0.59	-	0.03	−0.66
SUIT.	0.12	0.32	0.21	−0.23	0.30	0.14	0.49	0.24	0.75	0.23	−0.44	0.12	0.01	−0.30	0.03	-	0.17
ROL01	0.26	−0.76	−0.56	0.08	−0.26	−0.47	0.90	0.26	0.50	0.07	−0.50	0.79	−0.06	0.65	−0.66	0.17	-
PC.	0.59	−0.63	−0.66	0.55	0.05	−0.42	0.49	0.45	0.08	−0.15	0.04	0.87	0.37	0.50	−0.90	−0.04	0.60
CRIND	0.20	−0.20	−0.27	0.12	0.21	−0.05	0.03	0.17	−0.17	−0.68	0.05	0.53	−0.07	0.47	−0.23	−0.14	0.14
LOG.96	0.49	−0.33	−0.28	0.27	0.48	−0.02	0.65	0.35	0.32	−0.03	−0.20	0.81	0.43	0.60	−0.64	0.31	0.68
LOG.01	0.43	−0.24	−0.17	0.22	0.46	−0.05	0.59	0.19	0.43	0.01	−0.29	0.81	0.51	0.54	−0.66	0.35	0.65
COR96	0.37	−0.41	−0.39	0.04	0.28	−0.25	0.76	0.20	0.51	−0.01	−0.30	0.73	0.38	0.58	−0.72	0.43	0.75
COR02	0.22	−0.81	−0.57	0.14	−0.28	−0.54	0.79	0.24	0.38	0.04	−0.38	0.82	−0.07	0.70	−0.68	0.00	0.97
TDCMC.	−0.55	0.18	0.32	0.12	−0.03	0.35	−0.19	0.31	−0.45	0.33	0.45	−0.56	−0.62	−0.44	0.79	−0.09	−0.34
TDCPC.	−0.26	0.27	0.24	−0.39	−0.12	−0.05	−0.08	−0.64	0.40	−0.25	−0.39	0.02	0.12	−0.05	0.02	0.23	−0.07
TR.	0.36	0.35	0.41	0.46	0.50	0.41	0.20	0.64	0.30	0.65	−0.13	0.20	0.17	−0.41	0.09	0.52	0.08

Table A.2: EBRD index of enterprise reform (2001 - 2005)

Country	2001	2002	2003	2004	2005
Albania	2.0	2.0	2.0	2.0	2.0
Armenia	2.0	2.3	2.3	2.3	2.3
Azerbaijan	1.7	1.7	2.0	2.0	2.0
Belarus	1.0	1.0	1.0	1.0	1.0
Bulgaria	2.3	2.3	2.7	2.7	2.7
Croatia	2.7	2.7	2.7	3.0	3.0
Czech Republic	3.3	3.3	3.3	3.3	3.3
Estonia	3.3	3.3	3.3	3.3	3.7
FYR Macedonia	2.3	2.3	2.3	2.3	2.3
Georgia	2.0	2.0	2.0	2.0	2.3
Hungary	3.3	3.3	3.3	3.3	3.7
Kazakhstan	2.0	2.0	2.0	2.0	2.0
Kyrgyzstan	2.0	2.0	2.0	2.0	2.0
Latvia	2.7	2.7	3.0	3.0	3.0
Lithuania	2.7	3.0	3.0	3.0	3.0
Moldova	2.0	2.0	1.7	1.7	2.0
Poland	3.3	3.3	3.3	3.3	3.7
Romania	2.0	2.0	2.0	2.0	2.3
Russia	2.3	2.3	2.3	2.3	2.3
Slovakia	3.0	3.3	3.3	3.3	3.7
Slovenia	2.7	3.0	3.0	3.0	3.0
Ukraine	2.0	2.0	2.0	2.0	2.0

The values of the previous index have to be interpreted as follow.

EBRD index of enterprise reform

1 = Soft budget constraints (lax credit and subsidy policies weakening financial discipline at the enterprise level); few other reforms to promote corporate governance. 2 = Moderately tight credit and subsidy policy, but weak enforcement of bankruptcy legislation and little action taken to strengthen competition and corporate governance. 3 = Significant and sustained actions to harden budget constraints and to promote corporate governance effectively (for example, privatisation combined with tight credit and subsidy policies and/or enforcement of bankruptcy legislation). 4 = Substantial improvement in corporate governance and significant new investment at the enterprise level, including minority holdings by financial investors. 4 = + Standards and performance typical of advanced industrial economies: effective corporate control exercised through domestic financial institutions and markets, fostering market - driven restructuring.

Table A.3: EBRD index of reform of non-bank financial institutions (2001 - 2005)

Country	2001	2002	2003	2004	2005
Albania	1.67	1.67	1.67	1.67	1.67
Armenia	2.00	2.00	2.00	2.00	2.00
Azerbaijan	1.67	1.67	1.67	1.67	1.67
Belarus	2.00	2.00	2.00	2.00	2.00
Bulgaria	2.00	2.33	2.33	2.33	2.33
Croatia	2.33	2.67	2.67	2.67	2.67
Czech Republic	3.00	3.00	3.00	3.33	3.67
Estonia	3.00	3.33	3.33	3.33	3.33
FYR Macedonia	1.67	1.67	1.67	1.67	1.67
Georgia	3.67	3.67	3.67	3.67	4.00
Hungary	2.33	2.33	2.33	2.33	2.33
Kazakhstan	2.00	2.00	2.00	2.00	2.00
Kyrgyzsta	2.33	3.00	3.00	3.00	3.00
Latvia	3.00	3.00	3.00	3.00	3.00
Lithuania	1.7	1.7	1.7	2.0	2.0
Moldova	2.00	2.00	2.00	2.00	2.00
Poland	3.67	3.67	3.67	3.67	3.67
Romania	2.00	2.00	2.00	2.00	2.00
Russia	1.67	2.33	2.67	2.67	2.67
Slovakia	2.33	2.33	2.33	2.67	2.67
Slovenia	2.67	2.67	2.67	2.67	2.67
Ukraine	2.00	2.00	2.00	2.33	2.33

EBRD index of reform of non - bank financial institutions

1 = Little progress. 2 = Formation of securities exchanges, market - makers and brokers; some trading in government paper and/or securities; rudimentary legal and regulatory framework for the issuance and trading of securities. 3 = Substantial issuance of securities by private enterprises; establishment of independent share registries, secure clearance and settlement procedures, and some protection of minority shareholders; emergence of non - bank financial institutions (for example, investment funds, private insurance and pension funds, leasing companies) and associated regulatory framework. 4 = Securities laws and regulations approaching IOSCO standards; substantial market liquidity and capitalisation; well - functioning non - bank financial institutions and effective regulation. 4+ = Standards and performance norms of advanced industrial economies: full convergence of securities laws and regulations with IOSCO standards; fully developed non - bank intermediation.

Bibliography

Aten B., Heston, A., and Summers R., 2006. *Penn World Table Version 6.2.* Center for International Comparisons of Production, Income and Prices. University of Pennsylvania.

Beck, T., Levine, R., and Loyaza, N., 2000. ”Finance and the Sources of Growth” , *Journal of Financial Economics*, 58, pp. 261 - 300.

Beck, T., Demirguc - Kunt, A., and Levine, R., 2003. ”Law and Finance: Why Does Legal Origin Matter?” , *Journal of Comparative Economics*, 31, pp. 653 - 675.

Berle, A., A., and Means, G., C., 1932. *The Modern Corporation and Private Property*. New York: Macmillan.

Cass, A., 2003. ”Property Rights Systems and The Rule of Law”, Working Paper no. 29. International Centre for Economic Research, Torino, Italy.

Claessens, S., Djankov, S., and Klingebiel, D., 2000. ”Stock Markets in Transition Economies”, Financial Sector Discussion Paper no. 4. World Bank, Washington D.C.

Coase, R., H., 1960. ”The Problem of Social Costs” , *The Journal of Law and Economics*, 3, pp. 1 - 44.

Doing Business Methodology and Surveys, 2007.
http://www.doingbusiness.org/ExploreTopics/ProtectingInvestors/.

Easterbrook, F., H., and Fischel D., R., 1991. *The Economic Structure of Corporate Law*. Cambridge, MA: Harvard University Press.

EBRD, 2007. Structural change indicators.
http://www.ebrd.com/country/sector/econo/stats/index.htm.

Estrin, S., and Wright, M., 1999. ”Corporate Governance in the Former Soviet Union: An Overview” , *Journal of Comparative Economics*, 27, pp. 398 - 421.

Galor, O. 1996. ”Convergence? Inferences from Theoretical Models”, *Economic Journal* 106, pp. 1056 - 1069.

Guiso, L., Sapienza, P., Zingales, L., 2004. ”The Role of Social Capital in Financial Development” , *American Economic Review*, 94 (3), pp. 526 - 556.

Istituto nazionale per il Commercio Estero, 2007.
http://www.ice.it/estero2/skopje/investimenti.pdf.

Jensen, M., C., and Meckling, W., H., 1976. ”Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure” , *Journal of Financial Economics*, 3 (4), pp. 305 - 360.

Kaufmann D., Kraay A., and Mastruzzi M., 2003. ”Governance Matters III: Governance Indicators for 1996 - 2002”, Working Paper no. 3106, World Bank Policy Research, World Bank, Washington D.C.

Klapper, L., F., and Love, I., 2004. ”Corporate Governance, Investor Protection, and Performance in Emerging Markets” , *Journal of Corporate Finance*, 10 (5), pp. 703 - 728.

King, R., and Levine, R., 1993. ”Finance and Growth: Schumpeter Might Be Right” , *Quarterly Journal of Economics*, 108, pp. 717 - 738.

La Porta, R., Lopez - de - Silanes, F., Shleifer, A., and Vishny, R., 1996. ”Law and Finance” , Working Paper no. 5661, National Bureau of Economic Research, Cambridge, MA.

La Porta, R., Lopez - de - Silanes, F., Shleifer, A., and Vishny, R., 1997. ”Legal Determinants of External Finance” , *The Journal of Finance*, 52 (3), pp. 1131 - 1150.

La Porta, R., Lopez - de - Silanes, F., Shleifer, A., and Vishny, R., 1998. ”Law and Finance” , *The Journal of Political Economy*, 106 (6), pp. 1113 - 1155.

La Porta, R., Lopez - de - Silanes, F., Shleifer, A., and Vishny, R., 2000. ”Investor Protection and Corporate Governance” , *Journal of Financial Economics*, 58, pp. 3 - 27.

La Porta, R., Lopez - de - Silanes, F., and Shleifer, A., 2006. ”What Works in Securities Laws?”, *Journal of Finance*, 61 (1), pp. 1 - 32.

Pistor, K., 2000. ”Patterns of Legal Change: Shareholder and Creditor Rights in Transition Economies” , *European Business Organization Law Review*, 1 (1), pp. 59 - 108.

Pistor, K., Raiser, M., and Gelfer S., 2000. ”Law and Finance in Transition Economies” , *Economics of Transition*, 8 (2), pp. 325 - 368.

Shleifer A., 2007. Dataset for: Shleifer, A., Djankov, S., and McLiesh C., 2007. ”Private Credit in 129 Countries” , *Journal of Financial Economics*, 84 (2), pp. 299 - 329. http://www.economics.harvard.edu/faculty/shleifer/data.html.

Slavova, S., 1999. ”Law and Finance in Transition Economies” , LSE Financial Markets Group, Special Paper no. 121.

World Bank, 2002. ”Transition. The First Ten Years. Analysis and Lessons for Eastern Europe and the Former Soviet Union” . World Bank, Washington D.C.

World Bank, 2006. ”World Development Indicators.” World Bank, Washington D.C.

World Value Survey, 2005. http://www.worldvaluessurvey.org/.